

PORTLAND DOWNTOWN & QUARRIES MASTER PLAN  
Portland, Connecticut

October 29, 2001

by  
Carol R Johnson Associates Inc

in association with  
Vanasse Hangen Brustlin, Inc.  
Bartram & Cochran  
Haley & Aldrich, Inc.  
Jon Roll & Associates, Inc.  
Bargmann Hendrie + Archtetype, Inc.

October 29, 2001

Ms. Susan Decina, Planning Director  
 Town of Portland, Town Hall  
 33 East Main Street  
 Portland, CT 06480-0071

Re: Portland Downtown / Quarries Revitalization Project

Dear Susan,

Please find attached the completed Master Plan for the Portland Downtown / Quarries Revitalization Project. This document includes documentation of the entire three-month project, including the work of the following subconsultants:

- VHB – Traffic Analysis and coordination with ConnDOT
- Haley & Aldrich – analysis of the quarry edge and tailings (their full report was provided to you under separate cover)
- BH+A – Design recommendations for façade treatments for the Portland Country Market
- John Roll & Associates – Signage design
- Bartram & Cochran – Funding sources and contacts

Within this report we have included reductions of the plans developed for the project as well as memoranda and cost estimates. We have also itemized estimated project costs for your preferred Phase One project, the Town Green. It has been a pleasure to work with the committed and thoughtful people on the Committee on this project, as well as with you and Nancy Mueller. We believe the Town of Portland is in capable hands, and we would welcome the opportunity to work again with the Town of Portland.

Sincerely,

*Pamela F. Shadley*  
 Pamela F. Shadley, ASLA  
 Principal

Attach.

CAMBRIDGE  
 SALT LAKE CITY

- GERALD L. BROWN
- THOMAS R. DOOLITTLE
- HARRY J. FULLER
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## **I. INVENTORY & ANALYSIS**

The primary goal of the Inventory and Analysis Phase is to create an understanding of site conditions that will inform the subsequent Master Plan Phase. The knowledge gained in this phase will allow the CRJA Team to create designs that are buildable, permittable and fundable.

- Existing Conditions
- Permits and Approvals
- Conn DOT State Traffic Commission/Permitting Process
- Transportation Existing Conditions
- Four Lane Justification
- Architectural Analysis of the Portland Country Market

## EXISTING CONDITIONS

Portland, Connecticut is a town rich in hidden history. It is this history that will be the stimulus for new growth, character unification and historical perspective. With several sections of the town being examined and incorporated into the Master Plan, it is important to understand the conditions of the site as they currently exist.

The project limits include a 1,000 foot wide and one-half mile long corridor that runs north-south along Main Street(Route 17A) from the Arrigoni Bridge to the Post Office just north of Middlesex Avenue. The limits also include pedestrian linkages between Main Street and Silver Street, Commerce Street, behind the Portland Country Market, and Middlesex Avenue. The Master Plan will include the North and South Quarries, as well as the Town-owned riverfront.

### MAIN STREET

The Town of Portland is located on the spine of Route 17A or Main Street. As the direct link to the Arrigoni Bridge, 17A is heavily traveled and provides direct vehicular access between Route 9, Middletown and Portland. Soon after traveling over the Arrigoni Bridge, a visitor passes an existing welcome sign and enters the Town of Portland. Route 17A comes shortly to a large intersection at Marlborough Street. It narrows to a two-lane road with angled parking thereafter. The angled parking that exists on the remainder of Main Street is sporadic, without informational signage and includes islands for light and electrical poles that interfere with safe views for the vehicle drivers. Vehicles pull out from this parking directly into the main flow of traffic, causing several accidents each year. Traffic flows down Main Street and narrows once again at the Middlesex Avenue intersection. The road becomes a two-lane travel way without parking and is bordered by residential homes with large open lawns. An informal circulation pattern has formed from the Library parking lot off of Freestone Avenue. Connected parking areas from the library parking area serve as a short cut through for vehicles to Main Street.

Main Street contains several different site uses including residential, retail, business, automotive, civic/institutional and retail. The street has a 100' right of way, with a pavement width of 60-65', creating 20 feet of useable space on either side. This space is used in a variety of manners including planters, parking, yards, pocket parks and grass strips separating the pedestrian from the street. Main Street has two different characters that are divided by Marlborough Street. South of Marlborough Street is an area of transition acting as a gateway to the town of Portland. This area lies between the Arrigoni Bridge and Marlborough Street. Smaller, independent shops and services cater to the automotive and the motorcycle industry and there are some small restaurants established in wood-frame, 19<sup>th</sup> century buildings. North of Marlborough Street to the Post Office at the intersection of Main Street and Middlesex Avenue is the historic downtown of Portland. This area contains several 19<sup>th</sup> century wood-frame structures that have been adapted for commercial use through storefront additions and/or building modifications. There are also several commercial buildings that were constructed in the last half of the 20<sup>th</sup> century. Of the approximately 38 buildings fronting Main Street in this area, 13 are retail stores or restaurants, 14 are offices of professional services and 7 are residential. The three civic buildings, the Elementary School, the Post Office, and the Town Hall, are all architecturally pleasing buildings that are cornerstones for the Portland historical character.

## LINKAGES

Accessible routes from Main Street to the North and South Quarries exist on Silver Street, Commerce Street, behind the Portland Country Market and Middlesex Avenue. These potential overlook points all have different views of the quarries and can provide different experiences for the visitor. The Silver Street Overlooks are high above the North and South Quarries and are on a quiet, heavily wooded road. The ability to see both quarries at once provides immediate evidence of their differing character. There are small existing dirt areas that have large informally placed pieces of Brownstone as barriers to the quarry edge.

The second linkage down Commerce Street brings the visitor down a quiet residential street to a point 90 feet above the North Quarry's water surface. This space is currently adjacent to a parcel that is not maintained by its owners and appears to be a storage area for carnival equipment. A chain link fence divides the two spaces.

The third linkage to a quarry overlook occurs behind the Portland Country Market. The space is entered from the parking area behind the Market, which is designated, but not well-known, public parking. This is the highest point above the North Quarry and provides a dramatic view of the existing active quarry, the north face of the North Quarry and views of the Connecticut River. An existing foot trail connects the overlook space at Commerce Street to this potential overlook space behind the Portland Country Market. The slopes in this area are very steep and heavily wooded. Safety precautions are necessary in this area.

Finally, the fourth and primary linkage to the Quarries is along Middlesex Avenue. This road passes above the active quarry and provides a view of the historic North Quarry and the Arrigoni Bridge in the distance. Space for an overlook in this area is minimal though dramatic linking the past to the present. The road currently dead-ends into a fenced-off dirt path connection to Brownstone Street. There is a leveled gravel parking area for overflow parking that occurs with recreational games at the adjacent Park.

## NORTH AND SOUTH QUARRIES

The Portland Brownstone Quarries are located on the east bank of the Connecticut River at the western edge of town and have been registered as a National Historic Landmark. It is from these quarries that the main source of the distinctive reddish-brown sandstone called "brownstone", which was used so extensively in building construction during the latter half of the nineteenth century, was excavated and used extensively in New York City, Boston and Albany. The larger, northern quarry (36.79+/- acres) is separated from the smaller, southern quarry (9.77+/- acres) by Silver Street. The quarries are accessible along Brownstone Avenue, which also separates the quarries from the riverfront and industrial development to the west. It is from this vantage point that the natural joints used by the quarrymen to divide the brownstone into large blocks are visible in the quarry walls, as are numerous geological features of educational value. The squared-off peninsulas at the top of the quarry walls show the former locations of derricks used to hoist stone out of the quarries. The quarries are currently filled with water and have been since a hurricane in 1938. The two quarries have distinct characters, which are important to consider when designing their corresponding amenities.

The North Quarry is filled with water and bounded by Silver Street, Brownstone Avenue and the existing active quarry. It is bound by walls that reach up to 100 feet in height on the east side. Because the quarry was in varying degrees of excavation when it was flooded, the bottom surface can reach depths of 90 feet, but may also be very shallow in other areas. These waters

are quite turbid but due to the western vegetated edge do allow large mouth bass, yellow perch and American eel to propagate and inhabit the area. A constructed wall of large brownstone blocks, constructed during the Depression (W.P.A. 1938) separates the quarry from Brownstone Avenue. South of this wall along Brownstone Avenue is a promontory that functions as an informal entertainment space. The promontory is elevated 17 feet above the water and is squared off with constructed edges. It also has a stairwell that leads into the water and gives a view of the water's wildlife. Small musical bands perform in the summer months with the quarry walls as their backdrop. Beside the promontory is an informal boat launch area. This space slopes from the beginning of the promontory to the water's edge. Just north of the promontory is a spit of land. There is a similar, though more lengthy, piece directly across the quarry. The quarry reaches very shallow depths of 4-5' between the two land pieces and will allow for a potential connection.

The South Quarry is filled with water as well, though it is less turbid. This quarry's smaller size creates a more intimate, quiet atmosphere. The quarry walls reach heights of 70+ feet in the northeast corner, though depths are uncertain without any hydrographic data. There is a more gently sloped area on the eastern side of the quarry at an elevation of 30 that may be an appropriate area for passive recreation accessible from Willow Street.

## **RIVERFRONT AREA**

The dirt path at the end of Middlesex Avenue connects this street to the entrance of the existing active quarry, Brownstone Avenue and the mown sewer line that currently provides access to the proposed riverfront recreation area. There are informal paths in this riverfront area that have been created by volunteer groups. These trails run perpendicular to the sewer right of way that parallels the Connecticut River. The trails bring the visitor closer to the Connecticut River and to the high points that were created from the tailings of the North and South Quarries. Because this area was created by quarry tailings, its stability for large footprint buildings would need to be examined in a specific geological study. The area rests above the 100-year flood elevation of 23' National Geodetic Vertical Datum (NGVD) and therefore is protected from regular flooding of the Connecticut River. The sewer right-of-way runs parallel to the river and turns inland at an overlook of the Connecticut River. This view is of a wide expanse of the Connecticut River and allows the visitor to see it in its natural beauty free from industrial impediments. The right of way continues between an existing wetland and a floodplain. Both can provide valuable educational opportunities for the riverfront visitor. The right of way extends to the corner of Middlesex Avenue (extension) and Brazos Drive.

## PERMITS AND APPROVALS

The permits and approvals that will likely be required for development of the Portland Quarries and Downtown Master Plan are organized below by Agency to which the application would be made.

### **Army Corps of Engineers**

#### **SECTION 404, CLEAN WATER ACT:**

A permit required under Section 404 of the Clean Water Act (33 USC 1314) would be needed from the New England Division of the U.S. Army Corps of Engineers (ACOE) for construction in and permanent alteration of wetlands and waters of the U.S. (i.e the Connecticut River and any vegetated wetlands associated with the river).

#### **SECTION 401, CLEAN WATER ACT**

A permit required under Section 401 of the Clean Water Act would be needed from the Office of Long Island Sound Programs for any discharge into the navigable waters, including all wetlands, watercourses, and natural and man-made ponds. Applicants must also obtain certification from the Connecticut Department of Environmental Protection that the discharge is consistent with the federal Clean Water Act and the Connecticut Water Quality Standards.

#### **SECTION 10, RIVERS AND HARBORS ACT:**

Construction of bulkheads, piers or docks in the Connecticut River, a navigable waterway, will require a Section 10 permit as required by the Clean Water Act.

#### **FISH AND WILDLIFE COORDINATION ACT REVIEW:**

Construction in waters of the Connecticut River and any wetlands would require consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to ensure that wildlife conservation is given equal consideration. This will occur during the ACOE review process.

### **Connecticut Department of Environmental Protection**

The Office of Long Island Sound Programs regulates a variety of activities in tidal wetlands and in tidal, coastal or navigable waters of the state through two different permit programs: Structures, Dredging and Fill and Tidal Wetlands. General permits that will need to be applied for under these two programs are listed below.

#### **4/40 DOCKS**

This general permit applies to the construction of small residential docks which do not extend further waterward than the distance to a depth of -4 feet mean low water or a distance of 40 feet from mean high water, whichever is shortest. The docks must not be constructed over tidal wetlands, or eel grass, and must not occupy a square footage greater than 220 square feet.

#### **NON-HARBOR MOORINGS:**

This general permit applies to the installation, removal and replacement of individual noncommercial moorings which are located in areas not within the jurisdiction of a harbormaster. Types of moorings eligible for authorization include mooring buoys, pilings, "clothesline" systems, and single floating docks.

#### SOLID WASTE DISPOSAL ACT:

The Solid Waste Disposal Act is U.S. EPA guidelines for the disposal of non-hazardous solid waste. Excavated material to be removed from the site that is not contaminated with hazardous material would be disposed of in accordance with this Act.

#### NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL (NPDES) PERMIT:

A NPDES stormwater permit is required when construction exposes 5 or more acres of topsoil. A pollution prevention plan for control of stormwater during site construction must be developed and a Notice of Intent is filed with the U.S. EPA.

#### WATER RESOURCE CONSTRUCTION ACTIVITIES PERMIT:

This general permit applies to construction projects which involve minor activities regulated by the CT DEP under its Inlands, Wetlands and Watercourses, Stream Channel Encroachment Line, Dam Safety, and Water Diversions programs. The minor activities include excavation, filling, clearing or placing structures in a wetland, watercourse or floodplain.

#### STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES:

Applies to all discharges of stormwater and dewatering wastewaters from construction activities which include, but are not limited to , clearing, grading, and excavation and which result in the disturbance of five or more acres of total land are on a site.

#### **Connecticut Department of Transportation**

The State Traffic Commission(STC), the establishment within the Department of Transportation, promulgates regulations that establish a uniform system of traffic control signals, devices, signs and markings for public highways.

#### CERTIFICATE OF OPERATION

Thresholds have been established for development in regards to Section 14-311: "Open air theaters, shopping centers and certain other developments affecting state highway traffic". Any development providing 200 or more parking spaces or having a gross floor area of 100,000 square feet or more will need to file a Certificate of Operation. This application will need to verify that the construction or expansion of any development generating large volumes of traffic, having any exit or entrance on, or abutting or adjoining, any state highway or substantially affecting state highway traffic within Connecticut will not imperil the safety of the public.

#### **Town of Portland Planning and Zoning Committee**

Several Special Permits may need to be filed in order to approve proposed riverfront development. The following are possible proposed design features that may need special permit applications :

- Buildings within 100' of a watercourse (Planning and Zoning Commission and the Conservation Inland Wetlands Agency)
- Marinas & Boat yards including accessory uses such as marine offices, gasoline pumps for boating uses, boat and engine repair, marine store serving those people using and visiting the marina area and including temporary campground facilities associated therewith (Planning and Zoning Commission) This use will need a special permit for proposed use in the Industrial Zone(I), Residential Multi-Family Zone(RMD) and the Central Business District Zone(B3) and the Special Flood Hazard Zone.

- Outdoor recreation facilities and uses other than facilities and uses of the Town of Portland. This proposed use will need a special permit in the Central Business District and the Residential Zones(RMD, R15, R10).

A Temporary Special Permit will need to be filed to the Planning and Zoning Commission for earth material removal, filling and excavation.

#### **State Historic Preservation Office**

##### **NATIONAL HISTORIC PRESERVATION ACT REVIEW:**

The project team must consult with the State Historic Preservation Office (SHPO) to identify any historic or archeological resources present at the site. Construction proposed near any such resources must be reviewed by the SHPO.

#### **Connecticut Bureau of Waste Management Engineering and Enforcement Division**

##### **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA):**

This Act and associated regulations address the management, handling and disposal of regulated wastes (including hazardous waste) that may be encountered during project construction, for example, during stabilization of the riverbank slopes. Excavated material that after testing are shown to be regulated hazardous wastes (such as soils contaminated with PAHs or other chemicals) would be stored, transported and disposed of in accordance with this Act. This act is administered by the CT Bureau of Waste Management Engineering and Enforcement Division. The hazardous wastes are identified in Title 40 Code of Federal Regulations(CFR) Part 261 and regulated in the Regulations of Connecticut State Agencies(RCSA).



*Vanasse Hangen Brustlin, Inc.*

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Memorandum

TO: JENNIFER McLAUGHLIN  
CAROL R. JOHNSON ASSOCIATES  
1100 MASSACHUSETTS AVENUE  
CAMBRIDGE, MA 02138

DATE: AUGUST 3, 2001

PROJECT No.: 40494.01

FROM: STEPHEN J. O'NEILL  
PROJECT MANAGER

RE: PORTLAND- MAIN STREET STUDY  
CONNDOT STC PROCESS

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THIS MEMORANDUM PROVIDES GENERAL INFORMATION REGARDING THE CONNECTICUT DEPARTMENT OF TRANSPORTATION STATE TRAFFIC COMMISSION (STC) AND THEIR PERMITTING PROCESS.

SECTION 14-298 OF THE CONNECTICUT GENERAL STATUTES PROVIDES THE LEGAL AUTHORITY FOR THE ESTABLISHMENT, WITHIN THE DEPARTMENT OF TRANSPORTATION (CONNDOT), OF A STATE TRAFFIC COMMISSION. THE STC IS COMPRISED OF REPRESENTATIVES OF THE CONNECTICUT DEPARTMENTS OF TRANSPORTATION, PUBLIC SAFETY, AND MOTOR VEHICLES. THE STC PROMULGATES REGULATIONS THAT ESTABLISH A UNIFORM SYSTEM OF TRAFFIC CONTROL SIGNALS, DEVICES, SIGNS AND MARKINGS FOR PUBLIC HIGHWAYS. MOREOVER, STC ALSO ADOPTS REGULATIONS IN CONJUNCTION WITH THE LOCAL TRAFFIC AUTHORITIES THAT GOVERN THE USE OF STATE HIGHWAYS AND ROADS.

SUBSECTION (A) OF SECTION 14-311, ENTITLED "OPEN AIR THEATERS, SHOPPING CENTERS AND CERTAIN OTHER DEVELOPMENTS AFFECTING STATE HIGHWAY TRAFFIC," STATES THAT:

NO PERSON, FIRM, CORPORATION, STATE AGENCY, OR MUNICIPAL AGENCY OR COMBINATION THEREOF SHALL BUILD, EXPAND, ESTABLISH OR OPERATE ANY AIR THEATER, SHOPPING CENTER OR OTHER DEVELOPMENT GENERATING LARGE VOLUMES OF TRAFFIC, HAVING AN EXIT OR ENTRANCE ON, OR ABUTTING OR ADJOINING, ANY STATE HIGHWAY OR SUBSTANTIALLY AFFECTING STATE HIGHWAY TRAFFIC WITHIN THIS STATE UNTIL SUCH PERSON OR AGENCY HAS PROCURED FROM THE STATE TRAFFIC COMMISSION A CERTIFICATE THAT THE OPERATION THEREOF WILL NOT IMPERIL THE SAFETY OF THE PUBLIC.

Additionally, the STC has set thresholds to define when a development needs a certificate of operation. These thresholds define a development as any which provides 200 or more parking spaces or has a gross floor area of 100,000 square feet or more.

THE STC APPLICATION PACKAGE INCLUDES AN APPLICATION FORM AND A CHECKLIST THAT SPECIFIES THE INFORMATION THAT MUST BE PROVIDED. GENERALLY, FOR SIZEABLE DEVELOPMENTS PROPOSED ON VACANT LAND, ALL OF THE INFORMATION SPECIFIED IN THE CHECKLIST IS REQUIRED. A PRELIMINARY SCOPING

MEETING MAY BE HELD PRIOR TO STC SUBMITTAL IN ORDER TO DETERMINE THE EXTENT OF DATA NEEDED FOR REVIEW.

THE STC MEETS ON A MONTHLY BASIS, USUALLY MEETINGS ARE HELD ON THE THIRD TUESDAY OF THE MONTH. THE STC, UNDER SECTION 14-311, IS ALLOWED A MAXIMUM OF 120 DAYS TO REVIEW COMPLETED APPLICATIONS. THE REVIEW PERIOD TIMETABLE STOPS, HOWEVER, WHEN ADDITIONAL INFORMATION IS REQUESTED FROM THE APPLICANT AND RESTARTS UPON RECEIPT OF THE COMPLETED RESPONSE. IN SOME INSTANCES, THE REVIEW MAY TAKE LESS THAN 120 DAYS, DEPENDING UPON THE OVERALL COMPLEXITY OF THE SUBMITTAL.



*Vanasse Hangen Brustlin, Inc.*

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Memorandum

To: JENNIFER McLAUGHLIN  
CAROL R. JOHNSON ASSOCIATES  
1100 MASSACHUSETTS AVENUE  
CAMBRIDGE, MA 02138

DATE: AUGUST 6, 2001

PROJECT No.: 40494.01

FROM: STEPHEN J. O'NEILL, P.E.  
VAHID KARIMI, P.E.

RE: PORTLAND - QUARRIES AND DOWNTOWN  
REVITALIZATION PROJECT  
TRANSPORTATION EXISTING CONDITIONS

## Introduction

THE REVITALIZATION OF PORTLAND'S DOWNTOWN IS IN PART DEPENDANT ON EFFECTIVE AND EFFICIENT TRAFFIC CIRCULATION ALONG MAIN STREET, ADEQUATE PARKING, GOOD PEDESTRIAN AND BICYCLE CONNECTIVITY, AND INCREASED ACCESS TO THE NATIONALLY RECOGNIZED HISTORICAL QUARRIES. THIS TECHNICAL MEMORANDUM PROVIDES AN OVERVIEW OF THE EXISTING TRANSPORTATION ENVIRONMENT AND IDENTIFIES POTENTIAL ISSUES THAT MAY NEED TO BE ADDRESSED AS PART OF THE MASTER PLANNING EFFORT.

## Study Area Access

### *Regional Access*

PORTLAND IS LOCATED ALONG THE EASTERN SIDE OF THE CONNECTICUT RIVER AND IS BOUNDED BY GLASTONBURY TO THE NORTH AND EAST HAMPTON TO THE EAST AND SOUTH. THE ARRIGONI BRIDGE, OVER THE CONNECTICUT RIVER, PROVIDES A DIRECT CONNECTION TO MIDDLETOWN AND OTHER COMMUNITIES TO THE WEST. ROUTE 9 AND INTERSTATE 91 ARE EASILY ACCESSIBLE FROM DOWNTOWN PORTLAND VIA ROUTE 66, WHICH CROSSES THE RIVER VIA THE ARRIGONI BRIDGE. THE ARRIGONI BRIDGE IS CONSIDERED A MAJOR GATEWAY INTO PORTLAND. ROUTE 66 ALSO PROVIDES GOOD REGIONAL ACCESS TO COMMUNITIES TO THE EAST OF PORTLAND AS WELL AS CONNECTING TO ROUTE 2 IN MARLBOROUGH. ROUTES 17 AND 17A (MAIN STREET) PROVIDE ACCESS TO COMMUNITIES TO THE NORTH AND EVENTUALLY CONNECT WITH ROUTE 2 IN GLASTONBURY.

### *Downtown Gateways*

ACCESS TO DOWNTOWN PORTLAND IS PRIMARILY PROVIDED BY THE TWO GATEWAY INTERSECTIONS ON EITHER END OF MAIN STREET. THE SIGNALIZED INTERSECTION OF ROUTE 66 AND MAIN STREET (ROUTE 17A) IS THE MAJOR GATEWAY FOR SOUTHERN ENTRANCE OF PORTLAND'S MAIN STREET DISTRICT. THE PREDOMINANT TRAFFIC FLOW THROUGH THE INTERSECTION IS ALONG ROUTE 66 AND IS FACILITATED BY THE NORTHBOUND APPROACH FREE-RIGHT CONDITION. THE INTERSECTION IS FRAMED BY THE BACKDROP OF THE ARRIGONI BRIDGE AND IS ANCHORED BY COMMERCIAL AND RESIDENTIAL LAND USES. IN PARTICULAR, THE QUARRY HEIGHTS SENIOR HOUSING COMPLEX IS JUST NORTH OF THE INTERSECTION.

THE OFFSET INTERSECTION OF MAIN STREET, MIDDLESEX AVENUE, AND FAIRVIEW STREET IS THE NORTHERN GATEWAY TO THE MAIN STREET DISTRICT. THIS SIGNALIZED INTERSECTION TRANSITIONS MAIN STREET FROM A FOUR-LANE CROSS-SECTION TO A TWO-LANE CROSS-SECTION AND REPRESENTS A CHANGE IN LAND USE FROM COMMERCIAL TO RESIDENTIAL. THE PORTLAND POST OFFICE IS LOCATED ON THE NORTHWEST CORNER OF THE INTERSECTION AND THE PORTLAND MIDDLE SCHOOL IS ON THE SOUTHWEST CORNER OF THE INTERSECTION. MIDDLESEX AVENUE PROVIDES ACCESS TO AGOLIATA FIELD AND THE PROPOSED BROWNSTONE REDEVELOPMENT AREA ALONG THE CONNECTICUT RIVER. THIS INTERSECTION WOULD ALSO SERVE AS THE GATEWAY TO THE PROPOSED BROWNSTONE REDEVELOPMENT AREA.

### **Main Street Cross-Section**

MAIN STREET GENERALLY CONSISTS OF A FOUR-LANE CROSS SECTION WITH TWO TRAVEL LANES IN EACH DIRECTION. THE POSTED SPEED LIMIT IS 30 MPH WITH SPECIAL POSTED DESIGNATION OF 25 MPH AT FREESTONE STREET. ON-STREET PARKING, BOTH PARALLEL AND DIAGONAL, IS LOCATED ALONG MAIN STREET. THE PAVEMENT WIDTH VARIES BETWEEN 60 AND 84 FEET DEPENDING ON THE PRESENCE OF ON-STREET PARKING AND PROXIMITY TO INTERSECTIONS. SIDEWALKS OF VARYING CONDITIONS ARE ALSO LOCATED ON BOTH SIDES OF THE ROADWAY. THE MAJORITY OF THE RIGHT-OF-WAY ALONG MAIN STREET IS OVER 100 FEET. HOWEVER, JUST NORTH OF WAVERLY AVENUE THE RIGHT-OF-WAY IS APPROXIMATELY 90 FEET. THERE ARE OVER 30 CURB CUTS PROVIDING ACCESS TO VARIOUS BUSINESSES AND RESIDENCES ALONG MAIN STREET. LAND USES ALONG MAIN STREET INCLUDE MUNICIPAL, COMMERCIAL, OFFICE, AND RESIDENTIAL.

## **Downtown Circulation**

### **Traffic Conditions**

#### **Traffic Volumes**

DAILY TRAFFIC VOLUME COUNTS ON STUDY ROADWAYS WERE OBTAINED FROM AVAILABLE SOURCES AND COLLECTED ALONG MAIN STREET JUST NORTH OF ROUTE 66 BY VHB DURING JULY OF 2001. THE COUNT COLLECTED BY DIRECTION IN 15-MINUTE INCREMENTS USING AUTOMATIC TRAFFIC RECORDERS (ATR'S) FOR A PERIOD OF 48 TO 72 HOURS. AS PRESENTED IN *Table 1*, THE AVERAGE DAILY TRAFFIC VOLUME ALONG MAIN STREET IS APPROXIMATELY 13,700 VEHICLES PER DAY (VPD) WITH AN EVEN DAILY DIRECTIONAL DISTRIBUTION. THE MORNING PEAK HOUR TRAFFIC VOLUMES INDICATE A SOUTHBOUND COMMUTER PATTERN ALONG MAIN STREET WITH MORE THAN SIXTY PERCENT OF THE TRAFFIC TRAVELLING SOUTH. THE EVENING PEAK HOUR TRAFFIC VOLUMES ARE MORE BALANCED AND DO NOT INDICATE A STRONG COMMUTING PATTERN. FREESTONE AVENUE PROVIDES ACCESS TO MANY OF THE NEIGHBORHOODS IN DOWNTOWN PORTLAND AND CARRIES APPROXIMATELY 2,500 VPD. THE OTHER MAJOR FEEDER STREETS TO MAIN STREET CARRY SIGNIFICANTLY LESS TRAFFIC.

**Table 1**  
**Observed Traffic Volumes**

Location	ADT*	Morning Peak Hour	"K" Factor**	DD***	Afternoon Peak Hour	"K" Factor**	DD***
Main Street (Route 17A) North of Route 66	13,740	807	6%	63% SB	1,053	8%	53% NB
Freestone Avenue	2,500	N/A			N/A		
Fairview Street	950	N/A			N/A		
Middlesex Avenue	740	N/A			N/A		
Waverly Avenue	490	N/A			N/A		

Source: Automatic traffic recorder (ATR) counts conducted by Transportation Data Solution in July 2001 and the Midstate Regional Planning Agency.

\* Average daily traffic expressed in vehicles per day.

- \*\* Percent of average daily traffic that occurs during the peak hour.
- \*\*\* Direction Distribution

IN ADDITION TO DAILY TRAFFIC VOLUMES, VHB ALSO COLLECTED MANUAL TURNING MOVEMENT COUNTS (TMC) AT THE FIVE SIGNALIZED INTERSECTIONS ALONG MAIN STREET DURING THE WEEKDAY MORNING (7:00 AM TO 9:00 AM) AND EVENING PEAK PERIODS (4:00 PM TO 6:00 PM). THE COUNTS CONSISTED OF VEHICLE CLASSIFICATION (AUTO VS. TRUCK) AND PEDESTRIAN MOVEMENT AT INTERSECTIONS. THE PEAK HOUR (IDENTIFIED AS THE HIGHEST FOUR CONSECUTIVE 15-MINUTES WITHIN THE PEAK PERIOD) IS DETERMINED BETWEEN .....AM TO .....AM, AND .....PM TO .....PM. THE TURNING MOVEMENT COUNTS SUMMARIZED ON FIGURES 1 AND 2.

### Intersection Operations

LEVEL OF SERVICE (LOS) IS THE TERM USED TO DENOTE THE DIFFERENT OPERATING CONDITIONS, WHICH OCCUR AT AN INTERSECTION UNDER VARIOUS TRAFFIC VOLUME LOADS. LEVEL OF SERVICE PROVIDES AN INDEX TO THE OPERATIONAL QUALITIES OF AN INTERSECTION AND HIGHLIGHTS TRAFFIC OPERATIONAL PROBLEMS. LEVEL OF SERVICE DESIGNATIONS RANGE FROM A TO F, WITH LOS A REPRESENTING THE BEST OPERATING CONDITIONS AND LOS F REPRESENTING THE WORST. THE EVALUATION CRITERIA USED TO ANALYZE THE SIGNALIZED INTERSECTION ALONG MAIN STREET ARE BASED ON THE 1997 *Highway Capacity Manual*.

SINCE MAIN STREET IS INTERSECTED BY CLOSELY SPACED INTERSECTIONS, THE QUALITY OF TRAFFIC FLOW THROUGH SIGNALIZED INTERSECTIONS GENERALLY DICTATES THE OVERALL LEVEL OF SERVICE PROVIDED ON THIS ROADWAY SEGMENT. *Table 2* PRESENTS THE EXISTING LOS FOR EACH OF THESE SIGNALIZED INTERSECTIONS FOR BOTH MORNING AND EVENING PEAK CONDITIONS. AS ILLUSTRATED IN TABLE 2, THE SIGNALIZED INTERSECTIONS ALONG MAIN STREET ARE OPERATING AT ACCEPTABLE LEVELS OF SERVICE. THE MAJORITY THE INTERSECTIONS HAVE RESERVE CAPACITY AND CAN POTENTIALLY ACCOMMODATE AN INCREASE IN FUTURE TRAFFIC VOLUMES AND/OR CROSS-SECTION MODIFICATIONS ALONG MAIN STREET NORTH OF ROUTE 66.

**Table 2**  
**Signalized Intersection Capacity Analysis**

Signalized Intersections	Time Period	2001 Existing Conditions			Future Conditions Alternative 1			Future Conditions Alternative 2		
		LOS*	V/C**	Delay***	LOS*	V/C**	Delay***	LOS*	V/C**	Delay***
Main Street at										
Route 66	Morning Peak Hour	B	0.83	18.5						
	Afternoon Peak Hour	B	0.87	10.6						
Freestone Avenue	Morning Peak Hour	A	0.23	0.4						
	Afternoon Peak Hour	A	0.29	2.7						
Town Hall/ Library Drive	Morning Peak Hour	A	0.23	0.2						
	Afternoon Peak Hour	A	0.29	1.6						
Fairview Street	Morning Peak Hour	A	0.27	2.6						
	Afternoon Peak Hour	A	0.33	3.2						
Middlesex Avenue	Morning Peak Hour	A	0.27	3.8						
	Afternoon Peak Hour	A	0.33	3.0						

Source: Vanasse Hangen Brustlin, Inc.

\* Level of Service

\*\* Volume to Capacity Ratio

\*\*\* Delay = Average stopped delay to all vehicles entering the intersection in seconds / vehicle

### Travel Speeds

TRAVEL SPEEDS ALONG MAIN STREET HAVE BEEN A CONCERN OF MANY BUSINESS OWNERS, RESIDENTS, AND VISITORS. MAIN STREET'S WIDE CROSS-SECTION, CONSISTING OF FOUR TRAVEL LANES AND ON-STREET PARKING, TENDS TO ENCOURAGE HIGHER TRAVEL SPEEDS WITHIN THE CORRIDOR. AS PREVIOUSLY PRESENTED, THE POSTED SPEED LIMIT IS 30 MPH WITH AN ADVISORY SPECIAL POSTED SPEED LIMIT DESIGNATION OF 25 MPH NORTH OF FREESTONE AVENUE. IN CONJUNCTION WITH THE TRAFFIC VOLUME COUNTS, VHB ALSO COLLECTED SPEED COUNTS BY MEANS OF ATRs. *Table 3* PRESENTS THE AVERAGE AND 85<sup>TH</sup> PERCENTILE (THE SPEED AT WHICH 85 PERCENT OF MOTORIST TRAVELLING AT OR BELOW) VEHICLE SPEEDS OBSERVED ON MAIN STREET SOUTH OF FREESTONE AVENUE. AS PRESENTED IN TABLE 3, THE AVERAGE NORTHBOUND AND SOUTHBOUND SPEEDS ARE SLIGHTLY HIGHER THAN THE POSTED SPEED LIMIT. TABLE 2 SUGGESTS MOTORISTS ARE COMFORTABLE TRAVELING BETWEEN 38 AND 41 MPH ON MAIN STREET. THIS IS MOST LIKELY DUE TO THE WIDE CROSS-SECTION.

**Table 3**  
**Observed Speed Data – Main Street (Route 17A)**

Direction	Average Speed (MPH)	85 <sup>th</sup> Percentile (MPH)
Northbound	31	41
Southbound	32	38

Source: VHB, Inc. data collection July 2001.

### Truck Traffic

TRUCK TRAFFIC CAN SIGNIFICANTLY CONTRIBUTE TO DOWNTOWN TRAFFIC CONGESTION AND HAS AN IMPACT ON PEDESTRIAN SAFETY AND THE AESTHETICS OF A CENTRAL BUSINESS DISTRICT (CBD) AREA. HOWEVER, DELIVERY TRUCKS DESTINED FOR THE CBD NEED EFFICIENT ACCESS TO SUPPORT THE LOCAL BUSINESSES. VEHICLE CLASSIFICATION DATA FOR MAIN STREET WAS COLLECTED BY VHB AND IS PRESENTED IN *Table 4*. TRUCK TRAFFIC REPRESENTS APPROXIMATELY EIGHT PERCENT OF THE OVERALL TRAFFIC VOLUME ON MAIN STREET. THIS IS A RELATIVELY HIGH TRUCK PERCENTAGE CONSIDERING MAIN STREET OPERATING AS AN ARTERIAL FOR THE CORRIDOR SURROUNDING RESIDENTIAL AND RETAIL LAND USES.

**Table 4**  
**Vehicle Classification – Main Street (Route 17A)**

Direction	Motorcycles	Cars/ pick-ups/ vans	Buses	Single-unit Truck	Double-unit Truck	Multi-unit Truck
Northbound	21	5,886	61	288	369	99
Southbound	51	6,533	11	207	149	37
Total	72	12,419	72	495	518	136
Percent	0.5%	90.6%	0.5%	3.6%	3.8%	1.0%

Source: VHB, Inc. data collection July 2001.

### Accident Data

ACCIDENT REPORTS FOR THE STUDY AREA WERE OBTAINED FROM THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (CONNDOT) BUREAU OF PLANNING AND RESEARCH FOR THE THREE-YEAR PERIOD

BETWEEN JULY 1997 AND JUNE 2000. IT SHOULD BE NOTED THAT ONLY ACCIDENTS THAT RESULT IN DEATH, INJURY, OR PROPERTY DAMAGE FOR MORE THAN \$1,000 ARE REPORTED BY CONNDOT. BASED ON THIS INFORMATION, Table 5 SUMMARIZES THE STUDY AREA ACCIDENT HISTORY FOR THE PERIOD DESCRIBED ABOVE.

THERE WERE 68 ACCIDENTS WITHIN THE STUDY AREA FOR THE THREE-YEAR PERIOD REVIEWED. THE MAJORITY OF THE ACCIDENTS REPORTED ARE CONSISTENT WITH DOWNTOWN URBAN ROADWAYS. MAIN STREET, BETWEEN ROUTE 66 AND FREESTONE AVENUE, EXPERIENCED THE HIGHEST NUMBER OF ACCIDENTS (20) WITHIN THIS PERIOD. THE ROADWAY SEGMENT IN FRONT OF THE POST OFFICE ALSO EXPERIENCED A HIGHER NUMBER OF ACCIDENTS. THE MAJORITY (75%) OF THE ACCIDENTS IN FRONT OF THE POST OFFICE WERE PARKING AND BACKING RELATED ACCIDENTS. THIS INDICATES THE HIGH-TURNOVER ACTIVITY AT THE POST OFFICE CONTRIBUTES TO THE ACCIDENTS AT THIS LOCATION. FINALLY, TWO PEDESTRIAN ACCIDENTS WERE REPORTED AT THE OFFSET INTERSECTION OF MAIN STREET, MIDDLESEX AVENUE, AND FAIRVIEW STREET. THIS LOCATION IS ADJACENT TO THREE ACTIVE PEDESTRIAN GENERATORS: PORTLAND MIDDLE SCHOOL, THE POST OFFICE, AND CLOSE TO AGOLIATA FIELD.

IN ADDITION TO THE ACCIDENT DATA PRESENTED IN TABLE 5, CONNDOT'S "SUGGESTED LIST OF SURVEILLANCE STUDY SITES" (SLOSSS) WAS REVIEWED TO DETERMINE IF ANY STUDY AREA INTERSECTIONS ARE CONSIDERED HIGH ACCIDENT LOCATIONS ON A STATEWIDE BASIS. TYPICALLY, LOCATIONS LISTED ON THE SLOSSS ARE GIVEN PRIORITY FOR FUNDING OF FUTURE SAFETY IMPROVEMENT PROJECTS. ACCORDING TO THE 1995-1997 Traffic Accident Surveillance Report (TASR)<sup>1</sup> THE 0.09 MILE SEGMENT BETWEEN ROUTE 66 AND FREESTONE AVENUE IS INCLUDED ON THE SLOSSS LIST.

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<sup>1</sup> CONNECTICUT DEPARTMENT OF TRANSPORTATION, 1999

**Table 5**  
**Vehicle Accident Summary (July 1997 through June 2000)**

Year	Main Street (Route 17A)							
	At Route 66	Between Route 66 & Freestone Ave	At Freestone Avenue	Between Freestone & Town Hall	At Town Hall/ Parking Driveway	Between Town Hall & Fairview St	At Fairview St & Middlesex	In front of Post Office
1997	2	4	1	2	0	1	3	2
1998	3	4	0	0	4	2	1	3
1999	4	4	2	3	1	1	1	5
2000	1	8	0	2	0	2	0	2
Total	10	20	3	7	5	6	5	12
<b>Type</b>								
Rear-End	0	3	0	2	3	1	0	0
Head-on Turn	2	4	1	1	0	4	2	0
Turn	3	6	1	2	0	0	0	0
Sideswipe	3	1	1	1	1	0	0	3
Fixed Object	0	1	0	0	0	0	0	0
Moving Object	0	0	0	0	0	0	1	0
Pedestrian	0	0	0	0	0	0	2	0
Parking	1	2	0	1	0	0	0	5
Backing	1	3	0	0	1	1	0	4
Total	10	20	3	7	5	6	5	12
<b>Severity</b>								
Prop. Damage Only	5	15	2	7	4	3	2	12
Personal Injury	5	5	1	0	1	3	3	0
Fatality	0	0	0	0	0	0	0	0
Total	10	20	3	7	5	6	5	12
<b>SLOSSS*</b>								
	No	Yes	No	No	No	No	No	No

Source: State of Connecticut Accident Summaries (1997-2000), Connecticut Department of Transportation.  
 1995-1997 Traffic Accident Surveillance Report (TASR), Connecticut Department of Transportation.

\* Suggested List of Surveillance Study Sites. (SLOSSS)

**Transit Services**

THE MIDDLETOWN TRANSIT DISTRICT (MAT) OPERATES URBAN AND RURAL FIXED ROUTE SERVICE AS WELL AS SENIOR/DISABLED PARATRANSIT SERVICES IN PORTLAND, EAST HAMPTON, CROMWELL, DURHAM AND MIDDLETOWN. THE MAT BUSES OPERATE ON A FLAG STOP BASIS. THERE ARE NO DESIGNATED BUS STOPS. FIXED ROUTE BUS SERVICE OPERATES 6 DAYS A WEEK, MONDAY THROUGH SATURDAY. THE STUDY AREA IS SERVICED BY Rural Bus Route F- Portland to East Hampton. THE BUS ROUTE SERVES ROUTE 66, HIGH STREET, BARTLETT STREET AND MAIN STREET IN PORTLAND AND ROUTE 66, ROUTE 16, MAIN STREET AND SUMMER STREET IN EAST HAMPTON. THE BUS MAKES FOUR LOOPS DURING THE MORNING (5:45 PM, 6:45 PM, 7:45 PM AND 10:45 PM), ONE IN THE AFTERNOON (2:45 PM), AND ONE IN THE EVENING (5:45 PM).

## ***Pedestrian/ Bicycle Environment***

WALKING AND BICYCLING ARE IMPORTANT MODES OF TRANSPORTATION AND CAN PLAY AN IMPORTANT ROLE IN CREATING A VIBRANT DOWNTOWN. SOME LAND USES ALONG MAIN STREET SHOULD BE CONSIDERED HIGH PEDESTRIAN/ BICYCLE ACTIVITY CENTERS. THESE LAND USES INCLUDE:

➤ OLD TOWN HALL	➤ POST OFFICE
➤ PORTLAND LIBRARY	➤ MIDDLE SCHOOL
➤ SENIOR HOUSING	➤ BROWNSTONE REDEVELOPMENT AREA
➤ PORTLAND COUNTRY MARKET	➤ AGOLIATA FIELD

PEDESTRIAN DESIRE LINES BETWEEN THESE ACTIVITY SECTIONS ARE FAIRLY WELL DEFINED ALONG MAIN STREET WITH THE EXCEPTION OF CONNECTIONS TO THE QUARRIES AND THE BROWNSTONE REDEVELOPMENT AREA. THESE CONNECTIONS MAY NOT HAVE BEEN DEVELOPED BECAUSE OF THE RESTRICTED NATURE OF THESE AREAS. IN ADDITION, A WELL DEFINED PEDESTRIAN CONNECTION TO AND FROM THE ARRIGONI BRIDGE IS NOT APPARENT.

THE MAIN STREET CORRIDOR HAS SIDEWALKS ON BOTH SIDE OF THE ROADWAY. THE SIDEWALKS ARE GENERALLY BETWEEN 4 AND 5 FEET IN WIDTH AND ARE NOT ADEQUATE FOR HIGH PEDESTRIAN ACTIVITY. IN ADDITION, THE MAJORITY OF THE SIDEWALKS ARE IN FAIR OR POOR CONDITION BECAUSE OF SETTLING, CRACKING, AND UNEVENNESS. IN ADDITION, APEX RAMP<sup>2</sup> ARE NOT TYPICALLY PROVIDED AT INTERSECTIONS CREATING A SOMEWHAT DIFFICULT PEDESTRIAN ENVIRONMENT (ESPECIALLY FOR SENIORS AND PERSONS WITH DISABILITIES).

PEDESTRIAN ACTUATED TRAFFIC SIGNALS AND PAINTED CROSS-WALKS ARE EVENLY SPACED ALONG MAIN STREET AND PROVIDE GOOD CONNECTIONS TO KEY PEDESTRIAN/ BICYCLE ACTIVITY CENTERS LISTED ABOVE. THESE PROTECTED PEDESTRIAN CROSSINGS ARE LOCATED AT THE FOLLOWING FOUR SIGNALIZED INTERSECTIONS:

- MAIN STREET AND ROUTE 66
- MAIN STREET AND FREESTONE AVENUE
- MAIN STREET AND TOWN HALL/ LIBRARY DRIVE
- MAIN STREET AND FAIRVIEW STREET

THE OUTSIDE TRAVEL LANES ALONG MAIN STREET ARE APPROXIMATELY 15 FT WIDE AND PROVIDE ADEQUATE BICYCLE ACCOMMODATIONS FOR UTILITARIAN AND NOVICE BICYCLISTS. HOWEVER, PARALLEL AND DIAGONAL PARKING ALONG MAIN STREET DETRACT FROM THE ON-ROAD BICYCLE ENVIRONMENT BECAUSE OF THE INCREASED CONFLICTS FROM OPENING CAR DOORS AND VEHICLES BACKING OUT. FINALLY, LIMITED PEDESTRIAN AND BICYCLE AMENITIES EXIST IN THE MAIN STREET CORRIDOR.

## **Downtown Parking**

MAIN STREET IS WELL SERVED BY BOTH ON-STREET AND OFF-STREET PARKING. ON-STREET PARKING ALONG MAIN STREET CONSISTS OF DESIGNATED DIAGONAL PARKING AND UNMARKED PARALLEL PARKING. THERE ARE OVER 60 DIAGONAL PARKING SPACES AND APPROXIMATELY 40 PARALLEL PARKING SPACES. IN ADDITION TO ON-STREET PARKING, TWO PUBLIC PARKING LOTS PROVIDE PARKING OPPORTUNITIES FOR MAIN STREET PATRONS. THE MUNICIPAL LOT BEHIND THE PORTLAND COUNTY MARKET CONSISTS OF 46 SPACES AND THE PORTLAND LIBRARY LOT CONSISTS OF 105 SPACES. Table 6 PRESENTS THE ON-STREET AND OFF-STREET PARKING SUPPLY, AS WELL AS, REPRESENTATIVE MORNING AND EVENING OBSERVED PARKING DEMANDS. BASED ON THESE OBSERVATIONS APPROXIMATELY 40% OF THE ON-STREET PARKING SUPPLY IS USED DURING THE MORNING AND EVENING AND APPROXIMATELY 33% OF THE PUBLIC OFF-STREET PARKING IS USED DURING THE SAME PERIODS. THIS INDICATES THERE IS AMPLE PARKING TO SUPPORT FUTURE GROWTH ALONG MAIN STREET.

<sup>2</sup> APEX RAMPs ARE REQUIRED BY STATE STANDARDS TO MEET AMERICAN WITH DISABILITIES ACT (ADA) STANDARDS.

**Table 6**  
**Parking Supply/Demand Summary**

	Supply	AM Demand*	PM Demand**
<u>On-Street (Main Street)</u>			
Parallel	43***	12	16
Diagonal	66	32	25
Sub Total	109	44	41
<u>Off-Street Public Parking</u>			
Municipal Lot	46	18	12
Library Lot	105	26	34
Sub Total	151	44	46
<b>Total</b>	<b>260</b>	<b>88</b>	<b>87</b>

Source: VHB Field observation on Friday July 13, 2001

\* Demand at 11:00 AM

\*\* Demand at 2:00 PM

\*\*\* General estimate

## Transportation Issues

BASED ON FIELD OBSERVATIONS, DATA COLLECTION EFFORTS, AND COMMITTEE INPUT THE FOLLOWING KEY TRANSPORTATION ISSUES HAVE BEEN IDENTIFIED:

### Access

- THE DOWNTOWN BUSINESS DISTRICT IS VERY ACCESSIBLE AND WELL SERVED BY REGIONAL ROADWAY NETWORK SYSTEM.
- MAIN STREET LACKS GATEWAYS DEFINING ENTRANCE POINTS INTO THE DOWNTOWN BUSINESS AREA.
- MAIN STREET'S WIDE PAVEMENT CROSS-SECTION ENCOURAGES HIGH VEHICLE TRAVEL SPEEDS.

### Traffic Conditions

- THERE ARE APPROXIMATELY 13,500 VEHICLE PER DAY TRAVELLING ON MAIN STREET.
- ALL OF THE STUDIED SIGNALIZED INTERSECTIONS ALONG MAIN STREET OPERATE AT AN ACCEPTABLE LEVEL OF SERVICE (LOS A AND B) DURING PEAK HOURS.
- MAIN STREET'S EXISTING CROSS-SECTION MORE THAN ADEQUATELY FACILITATES EFFICIENT TRAFFIC FLOW.
- MAIN STREET'S WIDE CROSS-SECTION ENCOURAGES MOTORISTS TO TRAVEL AT HIGHER TRAVEL SPEEDS THAN THE POSTED 30 MPH SPEED LIMIT.
- TRUCK TRAFFIC ON MAIN STREET IS RELATIVELY HIGH (8%) CONSIDERING THE SURROUNDING LAND USES AND FUNCTIONAL CLASSIFICATION OF THE ROADWAY.
- ALONG THIS HALF-MILE CORRIDOR, THERE ARE APPROXIMATELY THIRTY CURB-CUTS SERVING RESIDENTIAL AND COMMERCIAL USES ALONG MAIN STREET.
- THE ROADWAY SEGMENT (MAIN STREET) BETWEEN ROUTE 66 AND FREESTONE AVENUE HAS BEEN LISTED ON CONNDOT'S SUGGESTED LIST OF SURVEILLANCE STUDY SITES FOR HIGH ACCIDENT FREQUENCY/SEVERITY.
- THE ROADWAY SEGMENT (MAIN STREET) IN FRONT OF THE POST OFFICE HAS EXPERIENCED A HIGH FREQUENCY OF ACCIDENTS RELATED TO DOUBLE PARKING AND PARKING MANEUVERS.

### Pedestrian/Bicycle

- MAIN STREET'S WIDE CROSS-SECTION CREATES A PEDESTRIAN BARRIER.

- THE SIDEWALKS ALONG MAIN STREET ARE NOT WIDE ENOUGH AND ARE IN FAIR TO POOR CONDITION.
- LIMITED PEDESTRIAN AND BICYCLE AMENITIES EXIST IN THE MAIN STREET CORRIDOR.
- PEDESTRIAN CONNECTIONS TO ACTIVITY CENTERS ARE FAIRLY WELL DEFINED ALONG MAIN STREET.
- BETWEEN 1997 AND 2000 THERE HAVE BEEN TWO REPORTED PEDESTRIAN ACCIDENTS AT THE INTERSECTION OF MAIN STREET, FAIRVIEW STREET, AND MIDDLESEX AVENUE.
- PARALLEL AND DIAGONAL PARKING ALONG MAIN STREET INCREASES POTENTIAL CONFLICTS BETWEEN BICYCLIST AND MOTORISTS.

### Parking

- THE ON-AND OFF-STREET PARKING SUPPLY CAN ADEQUATELY MEET CURRENT PARKING DEMAND.



*Vanasse Hangen Brustlin, Inc.*

54 TUTTLE PLACE  
MIDDLETOWN, CONNECTICUT 06457  
860 632-1500  
FAX 860 632-7879

Memorandum

TO: JENNIFER McLAUGHLIN  
CAROL R JOHNSON ASSOCIATES  
115 BROAD STREET  
BOSTON, MA 02110

DATE: OCTOBER 3, 2001

PROJECT No.: 40494.01

FROM: S. O'NEILL, P.E. AND V. KARIMI, P.E.

RE: FOUR LANE JUSTIFICATION  
REVISED OCTOBER 2, 2001

---

THIS TECHNICAL MEMORANDUM SUMMARIZES THE JUSTIFICATION FOR MAINTAINING THE FOUR-LANE CROSS-SECTION ON MAIN STREET IN PORTLAND, CONNECTICUT BETWEEN ROUTE 66 AND MIDDLESEX AVENUE. VANASSE HANGEN BRUSTLIN, INC. (VHB) AND THE PROJECT TEAM HAVE COLLECTED EXISTING TRAFFIC VOLUMES, REVIEWED CURRENT ROADWAY CONDITIONS, SOUGHT OUT PUBLIC INPUT, AND DISCUSSED FUTURE TRAFFIC GROWTH PROJECTIONS AND OPERATIONAL ISSUES WITH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (CONNDOT) TO DETERMINE THE RECOMMENDED CROSS-SECTION FOR MAIN STREET. THE FOLLOWING SUMMARIZES THIS INFORMATION:

PROJECTED GROWTH - THE TRAFFIC CAPACITY (AND LANE REQUIREMENTS) OF AN ARTERIAL ROADWAY, SUCH AS MAIN STREET IN PORTLAND, IS GENERALLY CONTROLLED BY ITS DESIGN AT SIGNALS, EITHER AT INTERSECTING STREETS OR MIDBLOCK LOCATIONS. THE *Highway Capacity Manual* (HCM) THEREFORE DOES NOT ADDRESS URBAN ARTERIAL CAPACITY. NEVERTHELESS, THE HCM'S CAPACITY PROCEDURES FOR MULTI-LANE ROADS IN SUBURBAN AREAS CAN BE ADAPTED AND USED FOR THE MAIN STREET CORRIDOR IN PORTLAND, WITH RESULTS THAT ARE EQUIVALENT TO "RULES-OF-THUMB" FOR ARTERIAL DESIGN THAT HAVE OFTEN BEEN APPLIED IN AN URBAN ENVIRONMENT.

THE HCM METHODOLOGY APPLIES FACTORS TO ADJUST IDEAL CAPACITY (SERVICE FLOW RATE), INCLUDING PEAK HOUR FACTOR, TRUCK COMPOSITION, AREA TYPE, AND DRIVER POPULATION. FOR A DESIGN LEVEL OF SERVICE "C", THE ATTACHED CALCULATION SUGGEST THAT A DESIRABLE MAXIMUM HOURLY SERVICE VOLUME OF APPROXIMATELY 912 VEHICLES PER LANE.

THE SECOND PART OF THE ANALYSIS IS TO DETERMINE THE PEAK HOURLY TRAFFIC VOLUME DEMAND IN EACH DIRECTION OF MAIN STREET CORRIDOR FOR A FUTURE DESIGN YEAR. BASED ON DISCUSSIONS WITH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (CONNDOT) HIGHWAY OPERATIONS UNIT, A 20-YEAR PLANNING HORIZON IS SUGGESTED FOR EVALUATING LANE REQUIREMENTS ON MAIN STREET. SUBSEQUENTLY, CONNDOT PROVIDED 2020 DESIGN HOURLY VOLUME NETWORK (ATTACHED) FOR THE STUDY CORRIDOR.

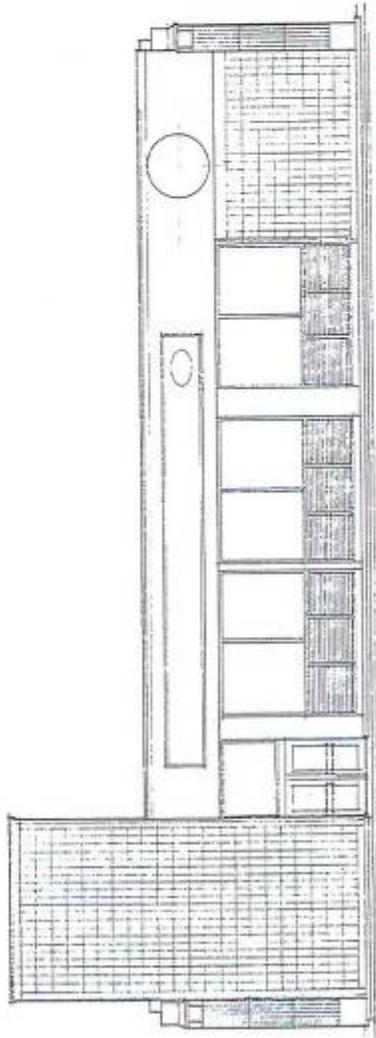
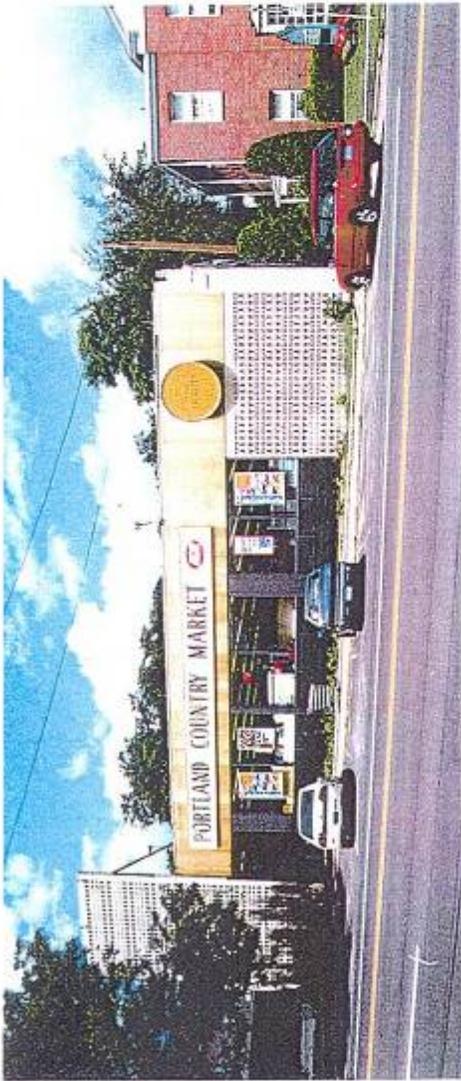
COMPARISON OF THE TOTAL TRAFFIC PROJECTIONS FOR EACH DIRECTION OF MAIN STREET (1,000 VEHICLES PER HOUR) WITH THE DESIRABLE SERVICE VOLUME OF 912 VEHICLES PER HOUR PER LANE INDICATES THAT MAIN STREET CORRIDOR SHOULD CONTINUE TO OPERATE AS FOUR LANES (TWO LANES PER DIRECTION).

ADDITIONAL TURNING LANES AT CRITICAL INTERSECTIONS MAY BE REQUIRED BASED ON FUTURE DEVELOPMENT PLANS. FOR INSTANCE, FUTURE LAND USES PROPOSED FOR THE RIVERFRONT DEVELOPMENT WITH ACCESS/EGRESS VIA MIDDLESEX AVENUE WILL DICTATE THE PROPOSED GEOMETRY AND CONTROL AT THE INTERSECTION OF MAIN STREET AND MIDDLESEX AVENUE.

CONNDOT REQUIREMENTS – ON-STREET PARKING ALONG MAIN STREET IS CRITICAL IN SUPPORTING A SUCCESSFUL DOWNTOWN BUSINESS DISTRICT. BASED ON CONNDOT'S INFORMAL REVIEW OF THE PROJECT, DIAGONAL AND PARALLEL ON-STREET PARKING WITHIN A TWO-LANE CROSS-SECTION (ONE LANE IN EACH DIRECTION) IS NOT DESIRABLE ON STATE ROADWAYS. WHEN ON-STREET PARKING IS PRESENT, A FOUR-LANE CROSS-SECTION INCREASES MANEUVERABILITY AND REDUCES POTENTIAL MOTOR VEHICLE CONFLICTS WITHIN THE CORRIDOR. THEREFORE, A FOUR-LANE CROSS-SECTION IS ALSO RECOMMENDED FOR MAIN STREET (ROUTE 17A) TO MAINTAIN ON-STREET PARKING WITHIN THE CORRIDOR.

PUBLIC OUTREACH – ON SEPTEMBER 14<sup>TH</sup>, 2001 THE PROJECT TEAM HELD A PUBLIC INFORMATION SESSION TO PRESENT THE OVERALL PROJECT AND SOLICIT FEEDBACK. TWO MAIN STREET CROSS-SECTION ALTERNATIVES WERE PRESENTED AS PART OF THIS INFORMATION SESSION. THE FIRST ALTERNATIVE WAS A TWO-LANE CROSS-SECTION WITH EXCLUSIVE LEFT-TURN LANES AT APPROPRIATE SIGNALIZED INTERSECTIONS. THE SECOND ALTERNATIVE WAS A MODIFICATION OF THE EXISTING FOUR-LANE CROSS-SECTION. THE SECOND ALTERNATIVE INCLUDED TRAVEL LANE WIDTH REDUCTIONS, PEDESTRIAN BULB-OUTS, BETTER ON-STREET PARKING DELINEATION, AND SIDEWALK IMPROVEMENTS. BASED ON A SHOW OF HANDS, THE SECOND ALTERNATIVE WAS OVERWHELMINGLY SUPPORTED BY THOSE IN ATTENDANCE.

IN CONCLUSION, ANTICIPATED GROWTH, CONNDOT REQUIREMENTS FOR STATE MAINTAINED ROADWAYS, AND PUBLIC INPUT INDICATES A MODIFIED FOUR-LANE CROSS-SECTION FOR MAIN STREET IS THE BEST ALTERNATIVE.



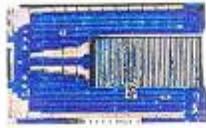
Existing Facade: Portland Country Market



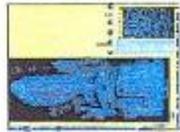
- PORTLAND SUPER MARKET, 1950S**
- FLUTED STONE OR PRECAST CONCRETE PANELS
  - MASONRY FRIeze WITH BELT COURSE & CORNING STONE
  - CORNER STONE
  - CONDENSED WINDOW BASE WITH DECORATIVE STRIKE
  - RECESSED ENTRANCE
  - CONTINGUOUS TRANSOM PANELS WITH HORIZONTAL TRIM
  - LARGE SIGN INSTALLED ON FRIeze
  - SMALL PROJECTING SIGN
  - GROSSCHECK SIGN LIGHT AT COFFING



Period Signage Graphics



Brilliant Colors



Vertical Counterpoint



Applied Trim



Geometric Patterns, Repeats



Bas Relief/Caricature

# PORTLAND DOWNTOWN & QUARRIES MASTER PLAN

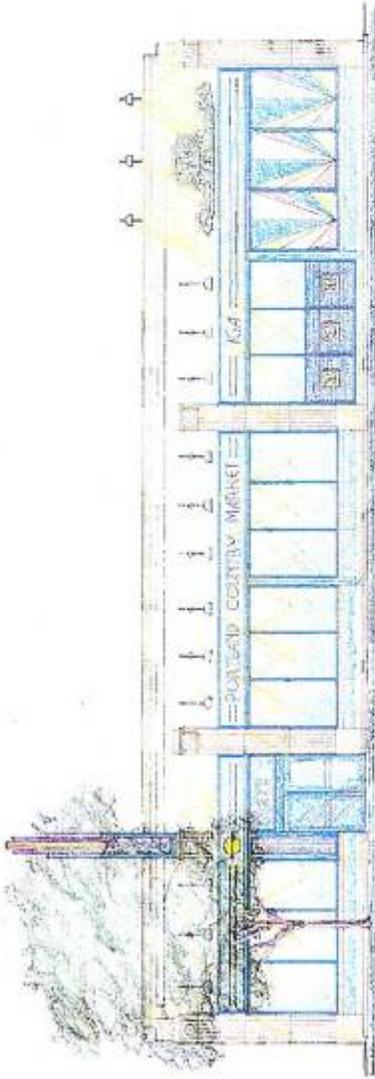
Portland, CT

October 11, 2001

**Design Team:**  
 Vanasse Hangen Brustlin, Inc., Middletown, CT  
 Bartram & Cochran, Farmington, CT  
 Bargmann Hendrye + Archetype, Inc., Boston, MA  
 Haley & Aldrich, Inc., Glastonbury, CT  
 Inn Roll & Associates, Cambridge, MA

# C R J : A

CAROL R. JOHNSON ASSOCIATES INC. Cambridge, MA  
 Landscape Architects and Environmental Planners



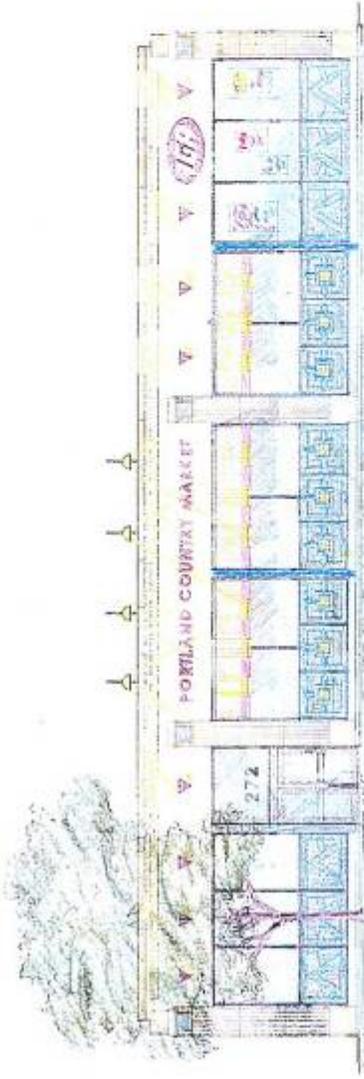
**PORTLAND COUNTRY MARKET: OPTION 'A'**

- UNCOVER & RESTORE MASONRY PILASTERS AND FRIEZE
- NEW GLAZING SURMOUNTED BY CONTINUOUS TRANSOM/SIGN BANDS
- GOOSENECK SIGHTLIGHTS
- NEW ART DECO 'TOWER' ELEMENT TO ANNOUNCE ENTRANCE
- BAS-RELIEF CARTOUCHE WITH HORN-OF-PLenty & GROCERY THEME
- 'TROMPE L'OEIL' PAINTING OR MOLDED FIBERGLASS
- PAINTED DECORATIVE PANELS CONCEAL FREEZER AREA
- STRIPPED WINDOW BASE: TILE OR METAL PANELS
- RETAIN & ENHANCE AIR INTAKE LOUVERS BY INSTALLING PLAQUES
- VIBRANT ART-DECO COLORS



**PORTLAND COUNTRY MARKET: OPTION 'B'**

- UNCOVER AND RESTORE MASONRY PILASTERS AND FRIEZE
- NEW DECORATIVE BORDER AT FRIEZE BELT AND COURSE
- NEW GLAZING & PANELIZED WINDOW BASE
- TRANSOM PANELS DERIVED FROM FORMER 'PORTLAND SUPER MARKET'
- SIGN WITH PIN-MOUNTED DIMENSIONAL LETTERS AT FRIEZE
- 'BUTTON' LIGHT SCENES
- SIMPLE, OPEN-ENDED FABRIC AWNINGS FIT INTO STOREFRONT FRAMES
- UNDER-AWNING LIGHTING ILLUMINATES STOREFRONT & SIDEWALK
- RETAIN & ENHANCE AIR INTAKE LOUVERS BY INSTALLING PLAQUES
- INTERIOR 'TRIPLE-TRACK' TACKBOARDS CONCEAL FREEZER AREA FOR USE OPAQUE 'SPANDREL GLASS'



**PORTLAND COUNTRY MARKET: OPTION 'C'**

- UNCOVER & RESTORE MASONRY PILASTERS AND FRIEZE
- RETAIN EXISTING GLAZING AND LOUVERS
- SIGN WITH PIN-MOUNTED DIMENSIONAL LETTERS AT FRIEZE
- DECO-INSPIRED SCENES AND GOOSENECK SIGHTLIGHTS ALIGN WITH GLAZING
- INCORPORATE 'IGA' LOGO INTO SIGNAGE/LIGHTING DESIGN
- OPEN-ENDED FABRIC AWNINGS EXPRESS FLUTED PILASTER THEME
- APPLY DECORATIVE FRAMES TO LOUVER GRILLES
- NEW GLAZING & WINDOW BASE ALIGNED WITH LOUVER GRILLES
- INTERIOR 'TRIPLE-TRACK' TACKBOARDS CONCEAL FREEZER AREA

**PORTLAND DOWNTOWN & QUARRIES  
MASTER PLAN**

Design Team:  
 Vanasse Hangen Brustlin, Inc., Middletown, CT  
 Barrtram & Cochran, Farmington, CT  
 Bargmann Hendrie + Archetype, Inc., Boston, MA

## II. MASTER PLAN

CRJA has developed a master plan for the downtown and quarries project area, based upon the goals and objectives discussed in Phase I and on updated existing conditions information. The master plan includes:

- Locations and types of visitor amenities
- Locations and configurations of vehicular ways and parking
- Location and configuration of shoreline treatments, water-based transportation, and all river activities
- Connections with other Town areas and destinations
- Bicycle and pedestrian trails
- Accommodation for public art or a heritage trail
- Site lighting
- Site signage, graphics and interpretation
- Site planting for aesthetics and visual screening
- Treatment of quarry edge for viewing and safety

This phase will also include analysis of the alternatives for different areas of importance including the Town Green, the Middlesex Avenue and Brownstone Avenue connection and the Main Street Median. The resulting master plan will provide the town with a 10 year projection of development in their area and will encourage future growth with a guided vision.

- Project Program
- Signage and Lighting
- Project Phasing
- Town Green Implementation
- Roadway Cross – Section Conn DOT recommendation
- Funding Sources and Contact Information
- Portland Median and Street Tree Plant List
- Portland Main Street Cost Estimate
- Portland Town Green Cost Estimate
- Portland Quarries Cost Estimate
- Portland Riverfront Cost Estimate
- Downtown Master Plan
- Riverfront Master Plan
- Street Typicals
- Material Details
- Planting Details
- Materials Palette
- Cut Sheets for Street Furnishings

## PROJECT PROGRAM

The Town of Portland's goals for the Quarries - Downtown Revitalization project are as complex as the multitude of different and sometimes contradictory issues that co-exist within the project area. The successful implementation of these goals is especially important as the health of the existing and proposed commercial and residential areas will be greatly affected by the project, and the final plan will set the standards and guidelines for future phases of development.

There are three distinct and interrelated areas that will be developed for the Portland Downtown and Quarries Master Plan. These areas include Main Street, the North and South Quarries and linkages to them, and finally the riverfront area. While each area will have individual program elements, there are also prevailing design treatments that will be incorporated into all three areas.

### Project Areas

#### MAIN STREET

- Enhance the pedestrian environment through street furniture, fencing, street plantings, pedestrian scale lighting, and sidewalk improvements
- Improve aesthetics by organizing and standardizing street furnishings and signage
- Improve safety and universal accessibility for pedestrians, bicyclists and motorists
- Link the pedestrian network to parking areas, public access points and visitor attractions
- Address traffic light signalization to improve multi-modal movements
- Improve parking availability/locations and location for shoppers, visitors, residents, merchants, and employees
- Clarify circulation patterns to improve efficiency and safety
- Assess possible lane reductions, neck downs and speed reduction for improved pedestrian access
- Preserve and encourage the vitality of the neighborhoods
- Develop design standards that complement the character of Portland and will contribute to economic vitality
- Improve definition of the street edge
- Develop gateway ideas at north and south ends of study area
- Develop urban design that includes information kiosk, seasonal displays and façade improvement ideas
- Pre School play space to be constructed by the Parks and Recreation and Youth Services (40' x 70')
- Accommodation of public art or heritage trail
- Conceptual site planting for aesthetics and visual screening
- Planting plan with plant list for the triangle island at the intersection of Main Street and Route 66
- Reference to underground utilities as part of the overall plan

## **LINKAGES AND QUARRIES**

- Overlook spaces at key street access points
- Create linkages from downtown to the quarry and to quarry overlooks
- Create linkages to municipal buildings, employment centers and commercial areas
- Assess Middlesex Avenue as main access to the quarries and riverfront, and the feasibility of connecting Middlesex Avenue with Brownstone Avenue
- Assess locations for interpretive displays, including historic brownstone sling
- Assess possible visitor amenities, including parking, restrooms, gateway, and visitor center / museum
- Pedestrian footbridge in shallow waters of North Quarry connecting two existing peninsulas
- Cantilevered path system on eastern edge of North Quarry
- Floating dock for interactive quarry wall display
- Location for bronze plaque (16" x 14 ½" x ½") by the National Park Service
- Picnic area for in South Quarry

## **RIVERFRONT AREA**

- Historic theme in markers, lighting, signage, site furnishings
- 12' wide continuous trail at Middlesex and Brownstone intersection
- Open space for passive recreation
- Loop trails for pedestrian/bike use
- Accommodation for winter activities including cross-country skiing and sledding
- Provide safety railing or edging at edge of shoreline if needed by building code
- Smaller, more natural edge treatment at sloped water's edge, with potential for riparian habitat
- Pedestrian access to water
- Non-structured fishing areas
- Access to water's edge at different elevations towards the south end of the site
- Canoe Launch
- Interpretive brownstone sculpture display
- Aesthetic treatment of adjacent gas tanks
- ADA accessibility to the riverfront

### ***Restaurant/Boathouse***

- High visibility building to accommodate food services for riverfront restaurant
- Boathouse building to accommodate facilities for boaters (toilets, showers, lockers) and administration for the marina
- Activity plaza adjacent to marina facilities
- Primary access point to Riverfront Park
- Nearby festival green and active children's park
- Seating and landscaping with historic character
- River overlooks
- Signage for boating information, events, way-finding
- Historical markers

### ***Docks and Marina***

- Floating docks

- Deep draft vessel berthing
- Pleasure boat docking
- Long term and short term mooring

## Prevailing Site Elements

### VEHICULAR/PEDESTRIAN CIRCULATION

- Parking to be universally ADA accessible
- Safe on street parking along Main Street
- Eliminate interconnection between Main Street and Freestone Avenue through Library parking lot.
- Post Office parking reworked for safe pull-in and pull-out
- Loading docks and trash consolidation area/dumpster (screened) for park space and associated restaurants
- Pedestrian/bike arrival spaces
- Pedestrian/bike trails are ADA accessible where possible
- Safe vehicular and pedestrian crossings
- Pedestrian trails through park to accommodate emergency and maintenance vehicles

### UTILITIES

- Sheet drainage for park area; minimize concentration of stormwater runoff, sweeping of walkways suggested
- Silt catchment that incorporate BMP's and collection of suspended solids
- Flood storage as necessary/no net loss of flood storage capacity
- Electrical and water connections at quarries and gathering spaces
- Electrical outlets within site lighting at intervals through park

### LIGHTING

- All fixtures to be metal halide
- All fixtures to be historic in design and similar throughout site
- Add attachment for banners/flags and seasonal lighting (wiring) at high visibility areas

#### *Park*

- Pedestrian lighting along water's edge and in park
- Safety lights for circulation stairs from upper decks

#### *Quarries*

- Uplighting for dramatic evening illumination

### SITE FURNISHINGS

- Consistent with Town standards and historical in design.
- Trash receptacles and ash urns
- Bike racks
- Benches and/or seat walls
- Railings; handrails and guardrails
- Bollards for vehicular access control if necessary

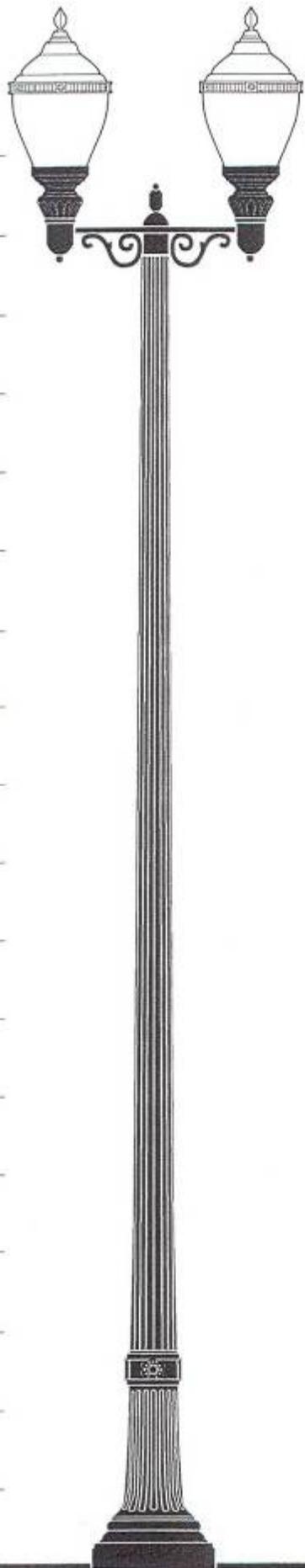
- Picnic area at South Quarry

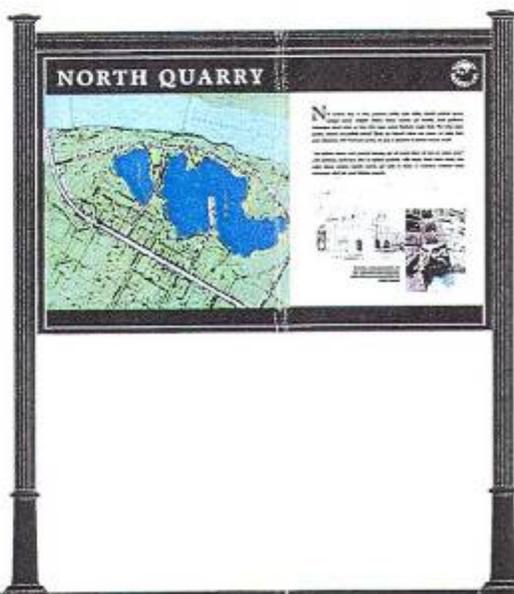
#### **SIGNAGE**

- Main Street welcome and way-finding signage
- Visitors/events parking
- Bus/car drop off
- Various buildings
- Parking signage along Main Street
- Historic marker signage
- Educational signage for nature trails

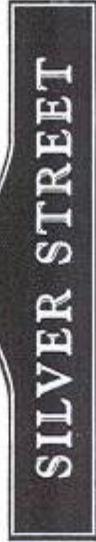
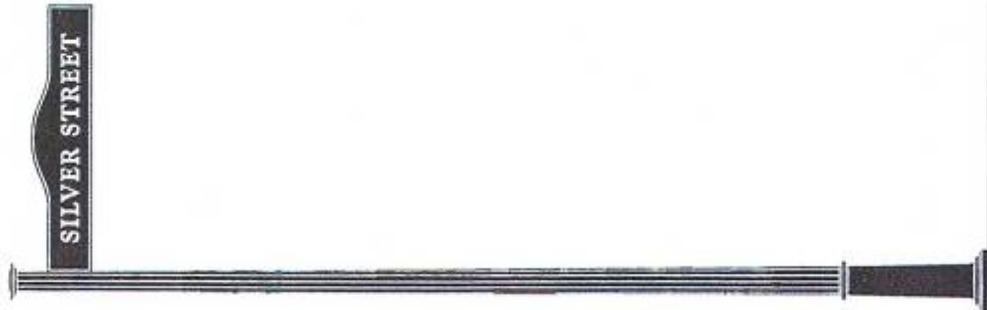
CRJA will also make phasing recommendations allowing for early implementation of improvements suitable for donation by community groups.

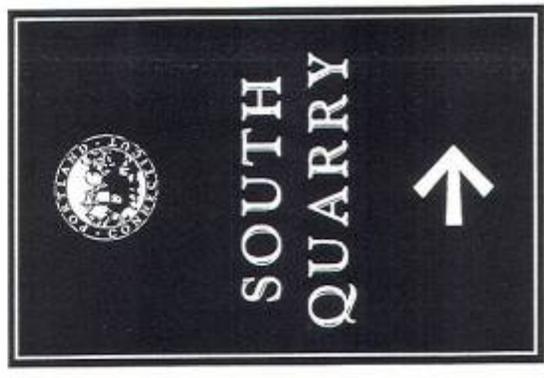
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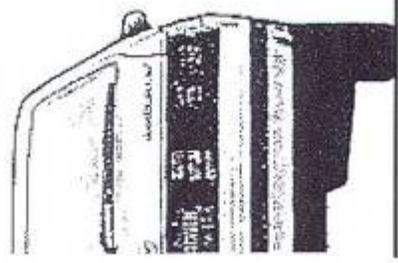


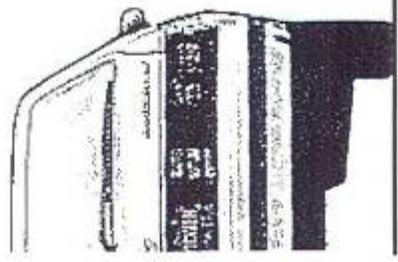


SIGNAGE DESIGN BY JON ROLL & ASSOCIATES





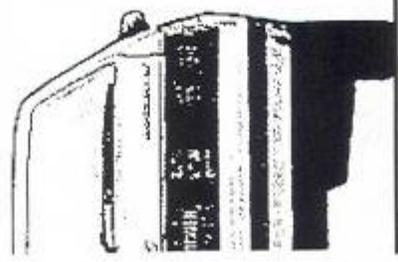
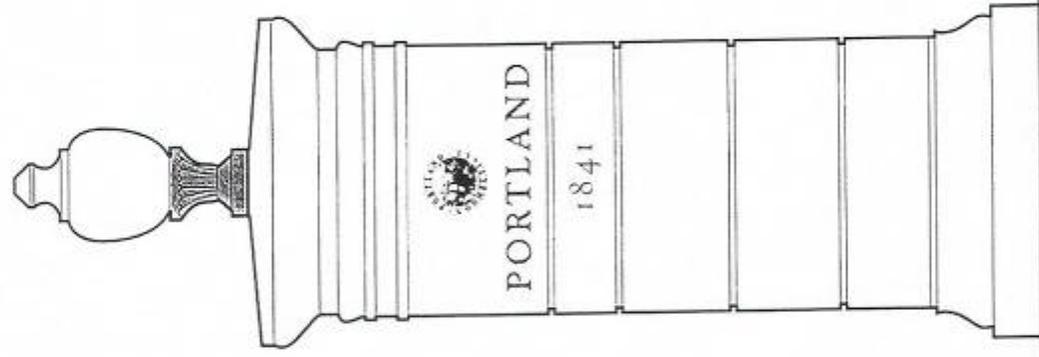


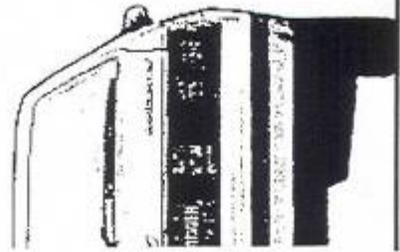




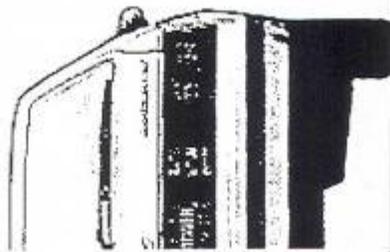
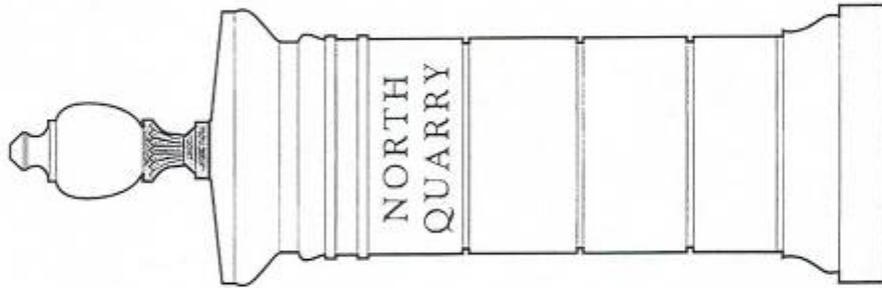
PORTLAND

1841





NORTH  
QUARRY



# PORTLAND



Town Seal

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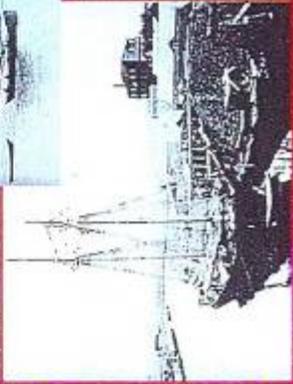
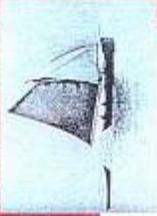
Centaur MT Small Caps and Oldstyle Figures

# SHIPBUILDING

**S**hipbuilding is the largest industry in the state. It employs more than 10,000 people and produces more than \$1 billion in annual output. The industry is a major contributor to the state's economy and is a source of pride for the people of Connecticut.

The state's shipbuilding industry has a long and distinguished history. It was founded in the 17th century and has since become a major industry in the state. The industry has grown and diversified over the years, but it remains a vital part of the state's economy.

Shipbuilding is a complex and demanding industry. It requires a high level of skill and expertise. The industry is also a source of pride for the people of Connecticut. It is a source of jobs and income for many people and is a major contributor to the state's economy.



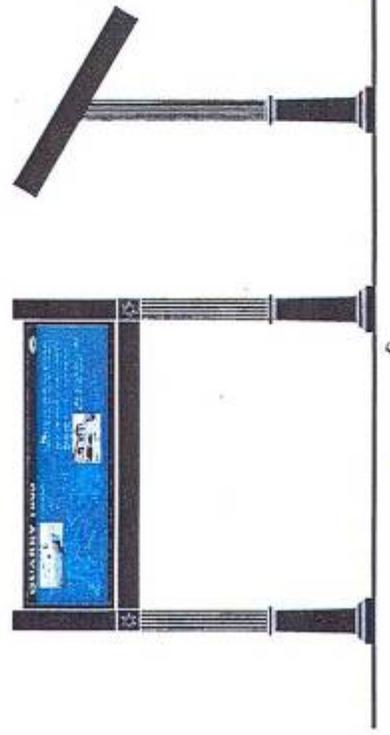


# QUARRY 1890

**S**everal of these quarries were built during the late 19th century, when the city was still a major industrial center. The quarries were built to provide stone for the city's public works and private homes. One of the most important quarries was the one built by the city's first mayor, John D. Allen, who was also the first mayor of the city of Portland.



The quarry was built in 1890 and was one of the largest quarries in the city at that time. It was built by the city's first mayor, John D. Allen, who was also the first mayor of the city of Portland. The quarry was built to provide stone for the city's public works and private homes. One of the most important quarries was the one built by the city's first mayor, John D. Allen, who was also the first mayor of the city of Portland.



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# NORTH QUARRY



**N**orth Quarry is a 175-acre park area, with a rich history of public recreation. The park is located in the North End of Portland, Connecticut, and is a popular destination for residents and visitors alike. The park features a large body of water, a walking trail, and a playground. The park is a great place to enjoy the outdoors and the beautiful views of the city.



This photograph shows the original building that was located on the site of the park. The building was a large, multi-story structure that was built in the late 19th century. It was used as a warehouse and later as a school. The building was destroyed by fire in 1900, and the site was eventually developed into the park that we know today.



# C R J : A

## MEMORANDUM

To: Susan Decina  
Company: Town of Portland  
Date: 10.29.01

---

Fax:

Project Name: Portland Downtown & Quarries MP Project No: M1077  
RE: Phasing File Code:  
From: Jennifer McLaughlin  
Copy to: Pam Snadley

---

The phasing strategy for the Town of Portland to construct the Main Street and quarry improvements and the riverfront area will depend on funds available to the Town. As you can see from the attached cost estimates, the Main Street, Town Green and Quarry improvements are estimated to cost approximately \$7,967,275, while the riverfront improvements are estimated at approximately \$5,930,000. As these amounts are quite large for a small town, project phasing is important. Installation of initial improvements in high visibility areas to generate interest and to encourage investors will be the primary focus. With Portland's rich history and its existing economic conditions, there are several funding opportunities available to the Town (see funding matrix by Bartram & Cochran) that will impact the project phasing. One such opportunity is the state grant of \$500,000 for small town revitalization programs that you have described to us. With this grant in mind, we have suggested three initial phasing opportunities below that would meet the grant amount and begin construction of the Portland Master Plan.

High impact areas for downtown Portland occur at the Portland Country Market, the Post Office and the Town Green. Connections to other important areas occur at these three places and would be excellent choices for the first Phase of the master plan. The first phasing area is the Portland Country Market and would include a stretch from Waverly Avenue to the first driveway past the Old Town Hall. The area on both sides of the street would be included while maintaining the existing centerline of the street. The total of this suggested improvement area comes to approximately \$402,450. This area includes the Old Town Hall and the Portland Country Market, two identifiable features that represent the long history of the Town and include the brownstone material of the North and South Quarries.

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# C R J : A

The second possible area, the Post Office, includes the Post Office drive on Main Street to the school crosswalk south of Freestone Avenue. This area is a gateway to the Town of Portland and a future gateway to the riverfront area. The cost of this improvement is approximately \$328,400.

The third recommended area for Phase I construction is the Town Green. This area is currently a traffic thruway that has the potential to be a strong civic space for town gatherings and events. The Town has also indicated that there are a number of donors that may help with the expense of the project. This project are totals \$833,770. If you remove some of the items such as the trees and the lights the cost of the project area is reduced to \$555,152.

The cost estimate for Main Street, including burying the overhead utilities, is approximately \$6,110,138. The cost for the streetscape work without the overhead utility work is \$4,910,138. It is recommended that the Town attempt to construct Main Street in its entirety, or in a small number of phases. Funding in larger increments would allow for fewer contractors and fewer job start ups and shut downs, imparting a more cost efficient means to Main Street construction. Appropriate areas of delineation will be important for safety considerations and connections to existing conditions, but will also be determined from the available funds. TEA-21 grants from ConnDOT are available in large increments and this project would be eligible for them; however, it will be several years before a new fund is created for this work. The Town should begin the pursuit of an eligible submission with the DOT.

There are ways to decrease the cost to the town with donations and investors. Street furnishings that people can identify with such as benches, trash receptacles and brownstone piers are excellent donor gifts for a fundraising drive. Commemorative plaques may be included on the pieces for donor recognition.

One phasing concept would be to concentrate first on burying the overhead utilities. This one action will significantly improve the appearance of Main Street. Then the street itself could be constructed in segments which could be separated by the major streets of Marlborough Street, Freestone Avenue, Waverly Avenue, and Middlesex Avenue/Spruce Terrace.

## END OF MEMORANDUM

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# C R J : A

## MEMORANDUM

To: Susan Decina, Nancy Mueller      Date: October 17, 2001  
Company: Town of Portland

---

Fax: 860-342-6787

Project Name: Portland Downtown and Quarries MP      Project No: M1077  
RE: Town Green Implementation      File Code:  
From: Pam Shadley  
Copy to: Jennifer McLaughlin, Vahid Karimi

---

Susan and Nancy,

As you requested, this memo outlines the total projected costs for the construction of the new Town Green. It is intended to assist the Town with budgeting this important construction project.

1. Projected construction cost: \$834,000  
Includes a design contingency because the plan is at a Master Plan level; design contingency will be at 0 when the project is bid.
  2. Add 10% as Owner's construction phase contingency: \$ 83,400
  3. Add fees for the proposed site work:
    - Survey \$ 18,000
    - Design fees (estimated at 12% of site construction cost) \$100,080  
12% is a reasonable number for all design fees through construction. It includes landscape architecture, civil engineering, and a small amount of electrical engineering. It may not include special or complex issues such as hazardous material, geotechnical or soils issues, traffic, complex artwork, or permitting. It includes a small number of meetings.
  5. Add budget for consultant special issues, or extra public or committee meetings or presentations: \$ 10,000
  4. Add a budget for garage removal: \$ 75,000  
Please note that the non-existence of potential hazards (asbestos) needs to be confirmed.  
Add estimated consultant fees for building removal: \$ 20,000  
(needs to be confirmed by demolition engineer)
- TOTAL ESTIMATED COSTS FOR TOWN GREEN PER PLAN: \$1,140,120.

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Easton, MA 01021 • Tel: 413-896-0240  
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# C R J : A

## Notes:

- Does not include land acquisition costs
- Does not include special art work
- Does not include revisions to traffic signals
- Does not include sidewalk work on Main Street (carried elsewhere)
- Does not include Police Station work other than paving and curbing, and garage removal

The Committee may want to consider phasing the costs for this work, and could begin by obtaining the survey. A survey will be necessary no matter when the work is done. Should the Committee want to obtain a survey immediately, VHB could perform this work as a contract amendment to the current Master Plan contract.

## END OF MEMORANDUM

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www.cra.com



Memorandum

To: PAM SHADLEY, ASLA

DATE: OCTOBER 24, 2001

PROJECT No.: 40494

FROM: VAHID KARIMI, P.E.

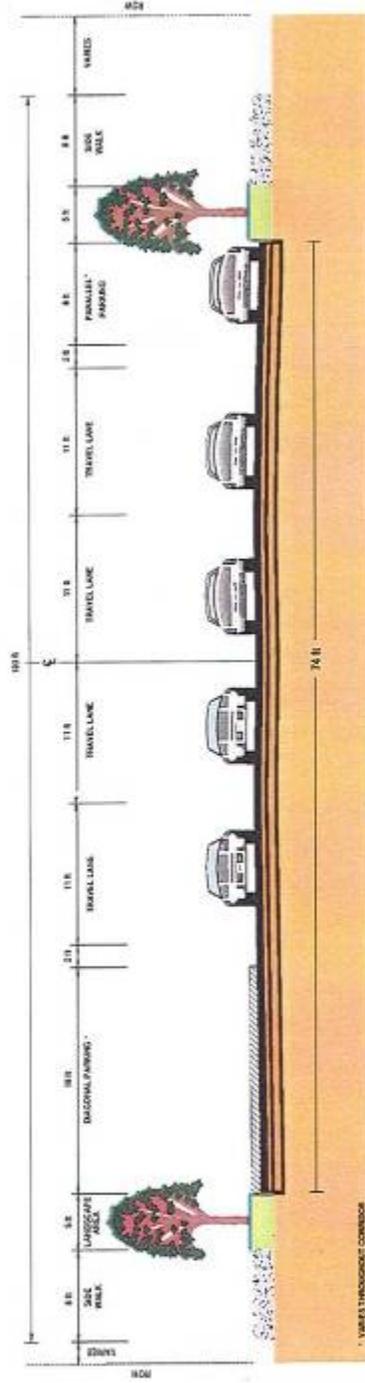
RE: PORTLAND - QUARRIES AND DOWNTOWN  
REVITALIZATION PROJECT  
ROADWAY CROSS-SECTION

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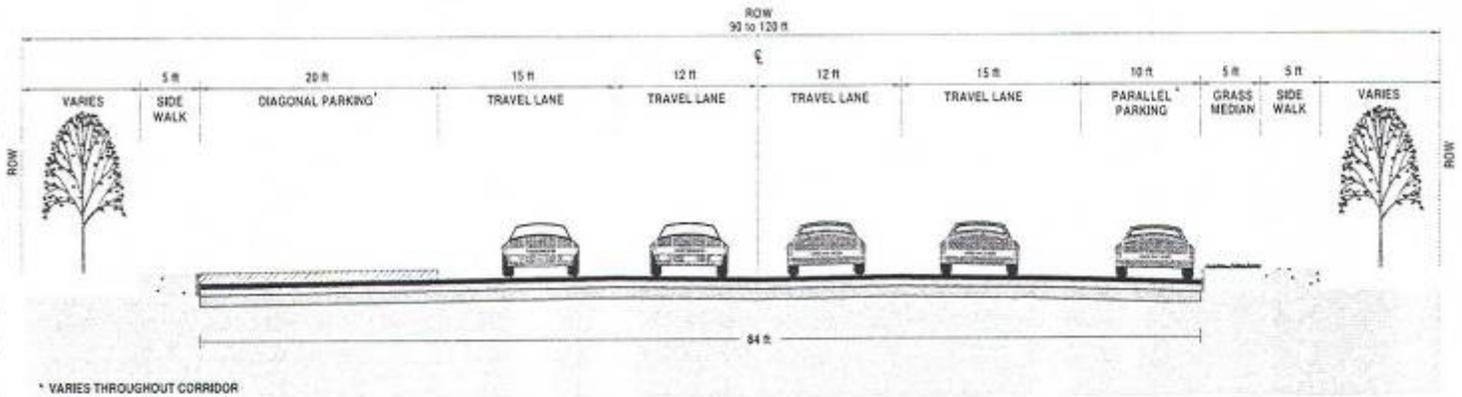
BASED ON OUR RECENT DISCUSSIONS WITH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (CTDOT) TRAFFIC OPERATIONS UNIT REGARDING FUTURE CROSS-SECTIONAL WIDTH REQUIREMENTS ON MAIN STREET, WE CONCLUDE THAT CTDOT WOULD CONSIDER THE RECOMMENDED 11-FOOT WIDE TRAVEL LANES (WITH 2-FOOT OUTSIDE SHOULDER) AS DEPICTED ON OUR PROPOSED CROSS-SECTION.

WE ALSO EXPLORED THE FEASIBILITY OF PROPOSING UNIT PAVERS AT CROSSWALKS ALONG THIS CORRIDOR. WE WERE INFORMED THAT MAINTENANCE HAS THE FINAL SAY ON THIS ISSUE, HOWEVER, IN GENERAL, THEY ARE NOT SUPPORTIVE OF USING PAVERS ON STATE ROADS DUE TO THE HIGH MAINTENANCE COSTS. INSTEAD, STREET STAMPING (PAVEMENT TEXTURING IN COLOR) AT CROSSWALKS MAY BE AN ALTERNATIVE OPTION FOR REPLICATING THE APPEARANCE OF PAVERS, BRICK, COBBLESTONE AND OTHER DECORATIVE PAVING PRODUCTS.

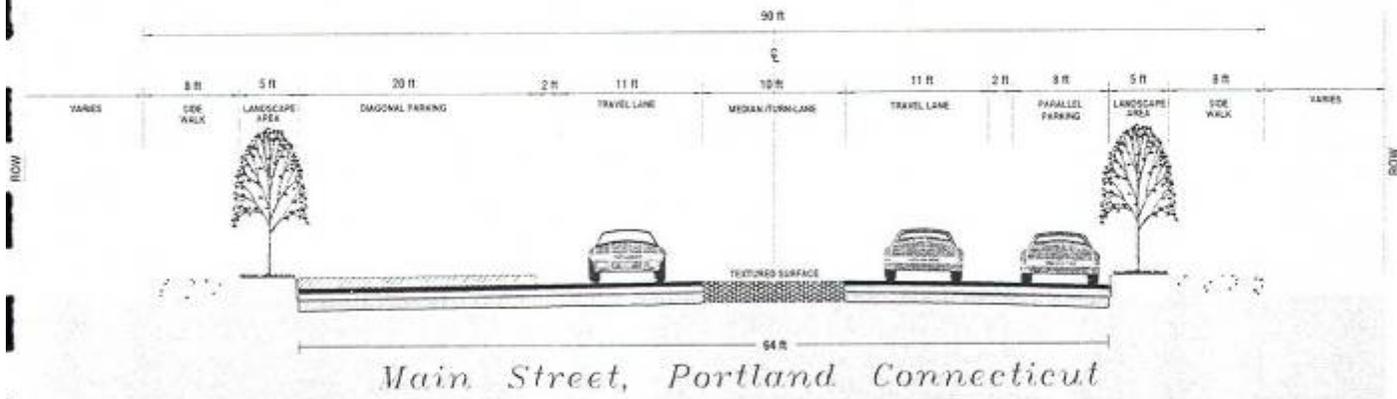
# Proposed Cross - Section



# Existing Cross - Section



# Proposed Cross - Section



Manasse Hangen Brustlin  
 64 Tuttle Place  
 Middletown, Connecticut

**TOWN OF PORTLAND  
Downtown, Quarries and Riverfront Master Plan**

**FUNDING SOURCES**

<b>NATIONAL</b>	<b>SOURCE</b>	<b>DESCRIPTION</b>	<b>FUNDING RANGE</b>
	<p>Federal Transportation Agency</p> <p><b>Contact:</b>  <b>Sebastian Sbalcio</b>  <b>ConnDOT</b>  <b>(860) 594-3219</b></p>	<p>The TEA 21 program replaces and expands the ISTEA program by making certain allocations available to each state for defined transportation projects. Allocations for bicycle and pedestrian pathways and recreational trails are included.</p> <p>Surface Transportation Program (STP) for improvements to local roads</p> <p><b>Submissions (which first must go to the Regional Planning Agency) should be made as soon as the project is defined.</b></p>	<p>Bicycle related Transit Enhancement Activities are 95% federally funded.</p> <p>Improvement planning and design approaches depend upon whether the project is exclusively on a state road or involves a local road intersecting with a state highway.</p> <p>The proposed local improvement must be a minimum \$100,000 project for attributable areas and \$50,000 for non-attributable areas.</p> <p>For projects located on a state road, the costs for preliminary engineering, right-of-way and construction will be allocated 80% federal / 20% state.</p>

			<p>For other projects, the municipality funds preliminary engineering; right of way costs are allocated 80% federal / 10% state / 10% local; and construction is funded 80% federal / 20% state.</p> <p>Grants typically range from \$150,000 to \$600,000; 20-50% of matching funds must be raised at time of application.</p>
<p>Kresge Foundation</p> <p><b>Contact:</b> Elizabeth Sullivan, VP (248) 643-9630</p>	<p>Grants to strengthen the capacity of non-profit organizations; usually focused on buildings, real estate and equipment; improvement of greenspace also recently received grant.</p> <p><b>Applications may be made in either May or September</b></p>	<p>Matching grants for restoration and preservation of historic features</p> <p><b>Guidelines and applications (for historically significant sites) were announced in February, 2001; 2002 schedule to be determined.</b></p>	<p>Historic Property Preservation Grants are for nationally significant historic sites and are for a minimum of \$250,000.</p> <p>Save Outdoor Sculpture Grants provide a maximum 50% match.</p>
<p>Heritage Preservation Program</p> <p><b>Contact:</b> Lucy Kurtz (202) 634-1422</p>	<p>Competitive Grants Program</p>	<p>To fund important conservation, preservation and education efforts on-the-ground in parks. Funding is provided as seed money to initiate projects or programs, or as challenge grants.</p> <p><b>Pre-proposal due by April 1 (on requests over \$5,000); proposals are due by June 1.</b></p>	<p>Grants average \$5,000-20,000. Maximum is \$50,000. Applications are only accepted from NPS units and related entities.</p>
<p>National Park Foundation</p> <p><b>Contact:</b> Julia Washburn (202) 785-4500</p>			

<p>National Park Service  <b>Contact:</b>  <b>BrendaBarrett@nps.gov</b></p>	<p>National Heritage Areas</p> <p>These are regions in which residents, businesses and local governments have joined together to conserve and celebrate heritage and special landscapes. Conservation, interpretation and other activities are managed by partnerships among federal, state and local governments and the private sector. Congress has established 18 areas around the country to date. A management entity is named by Congress to coordinate the actions of the partners.</p> <p>Each area is a settled landscape that tells the story of its residents and where the residents' use of the land has created a landscape that reflects their cultures. Each area is a new and ambitious experiment in ways to conserve and celebrate the Nation's natural and cultural heritage.</p>	<p>The National Park Service provides technical assistance as well as financial assistance for a limited number of years following designation.</p>
<p>National Endowment for the Arts (NEA)  <b>Contact:</b>  <b>(202) 682-5400</b></p>	<p>Heritage/Preservation</p> <p>Seeks to honor, assist, encourage, preserve and present those forms of artistic expression and practice that reflect the many cultural traditions of our nation. Projects may include the documentation, recording or conservation of highly significant works of art, artifacts, built or designed elements, collections of art, or of cultural traditions and practices</p> <p><b>Applications each year due by mid-August</b></p>	<p>Most grant awards are \$5,000 to \$100,000. Maximum grant is \$150,000.</p> <p>All grants require a 1-1 match.</p>

	<p>Land and Water Conservation Fund (LWCF)</p> <p><b>Contact:</b>  <b>Land Acquisition and Management Division</b>  <b>Department of Environmental Protection</b>  79 Elm Street, 3rd floor  Hartford, CT 06106  Tel: 860-424-3061</p>	<p>To encourage and improve the capability of State and local units of government and local nonprofit organizations in rural areas to plan, develop and carry out programs for resource conservation and development. High recreation potential is a critical attribute.</p> <p><b>Applications are made through the state contact indicated; funds were made available to states in December, 2000.</b></p>	<p>Amounts depend on federal funding for LWCF. Funds are allocated at the state level and then awarded by the state on a matching basis; CT's highest allocation has been \$5.9 million to date.</p>
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REGIONAL	SOURCE	DESCRIPTION	FUNDING RANGE
	<p>Silvio O. Conte National Fish and Wildlife Refuge</p> <p><b>Contact:</b> Beth Goettel (413) 863-0209</p>	<p>Challenge Cost Share Grants—to share the costs of local projects that support U. S. Fish and Wildlife Service goals.</p> <p>Educational Grants: for such things as special events, public education programs, printed materials, kiosks, teacher workshops, outdoor classrooms/gardens.</p> <p>Habitat Grants: for projects such as research, restoration, inventories, stabilization, monitoring, biodiversity protection.</p> <p><b>Applications are typically due each year by mid-December</b></p>	<p>At least 50% of the project costs must come from non-federal contributions. Funds are awarded through a competitive process. Since 1966, 166 projects have been awarded \$823,000 (for an average grant of just under \$5,000).</p>
STATE	SOURCE	DESCRIPTION	FUNDING RANGE
	<p>State of Connecticut</p> <p><b>Contact:</b> Portland's State Rep. and/or State Senator</p> <p>State of Connecticut</p> <p><b>Contact:</b> Portland's State Rep. and/or State Senator</p>	<p>Bonding for major projects; requires political support for projects under consideration</p> <p><b>Bonding decisions are made in the second quarter but support should be enlisted earlier</b></p> <p>Local Capital Improvement Program (LCIP)</p> <p><b>Lobbying for allocation to this project should begin as soon as possible</b></p>	<p>Potential funding will depend on what other competitive projects are seeking as well as the State's ability and desire to increase bonding.</p> <p>Portland has typically gotten \$65,000; allocation to be determined among potential projects.</p>

	<p>CT Humanities Council</p> <p><b>Contact:</b>  <b>Laurie Rayner</b>  <b>(860) 685-2260</b></p>	<p>Cultural / humanities grants</p> <p><b>November 1st grant application deadline</b></p>	<p>Starting July 1, 2001:          Planning grants range from \$5,000 to \$25,000.          Implementation grants range up to \$150,000 with a 25% match required on grants below \$25,000 and a 50% match required on grants of \$25,000 and above.          Typical grant range has been \$3,000 to \$60,000.</p>
	<p>CT Historical Commission</p> <p><b>Contact:</b>  <b>Paul Loether</b>  <b>(860) 566-3005</b></p>	<p>Grants for preservation of historically significant elements</p> <p><b>Submission for eligibility is early December each year</b></p>	<p>Program has up to \$20 million for FY 2001-2 and up to \$20 million more for FY 2002-3.          Cap is \$500,000 per year per municipality.</p>
	<p>Department of Economic and Community Development (DECD)</p> <p><b>Contact:</b>  <b>Enza O'Connell</b>  <b>(860) 344-2607</b></p>	<p>Small Town Economic Assistance Program (STEAP)          Funds are available for physical development projects; economic development projects, including construction or rehabilitation of commercial, industrial or mixed-use structures and constructing, reconstructing or repairing roads, access ways, and other site improvements; recreational projects and solid waste disposal projects; pilot historic preservation and redevelopment programs that leverage private funds; and development projects, including environmental protection and public safety.</p> <p><b>Recommend applying as soon as possible as this is a new program and procedures are still to be determined.</b></p>	

	<p>Connecticut Tourism Council</p> <p><b>Contact:</b>  <b>Rena Calcaterra</b>  <b>(860) 270-8093</b></p>	<p>Tourism Challenge Grant</p> <p>To encourage innovative regional tourism programs that will have a significant and measurable impact on CT's tourism industry. The primary goal is to draw visitors from outside the state; the secondary goal is to attract state residents to visit in-state attractions.</p> <p>Funding is available for marketing/promotional efforts including media advertising, direct mail, promotional pieces, production projects, public relations, research programs and studies and website promotion.</p> <p><b>Grant process starts each year in September with project description submission</b></p> <p>Clean Water Fund</p> <p>River Restoration Grants include restoration of river trails and parks adjacent to riverfront, particularly where it enhances recreational use of river</p> <p>Lake Grant Program (includes ponds) to improve water quality of recreational lakes</p> <p><b>Application deadlines will depend on when funding becomes available; information to be sent to all municipalities</b></p>	<p>\$7,500 minimum grant; average grant is \$15-20,000.</p> <p>Funds granted must be matched privately on a 1 for 1 basis.</p>
	<p>Department of Environmental Protection (DEP)</p> <p><b>Contact:</b>  <b>Charles Fredette</b>  <b>(860) 424-3714</b></p>		<p>River Restoration Grants typically range from \$50,000 to \$200,000 (through State Bond Commission).</p> <p>Lake Grant Program likely range is \$40,000 to \$75,000. 25% match required for planning and 50% match required for implementation projects</p>

	<p><b>Contact:</b> Allen Ames (860) 434-8638</p>	<p>Boating Infrastructure Program To construct, renovate and maintain tie-up facilities for transient boaters in vessels 26 or more feet in length</p> <p><b>Applications due by September 1.</b></p>	<p>Funds are available on an up to 75% grant / 25% local match basis.</p>
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<b>LOCAL</b>	<b>SOURCE</b>	<b>DESCRIPTION</b>	<b>FUNDING RANGE</b>
	<p>Town of Portland</p> <p><b>Contact:</b> <b>First Selectman</b></p>	<p>General Obligation Municipal Bonds A primary source for capital improvement project funds; requires approval by referendum</p> <p><b>Typically coordinated with November elections</b> Supports environmental projects and educational programs</p> <p><b>Applications due each year in early December</b></p>	<p>Potential funding will depend on what other competitive projects are seeking as well as Town's ability and desire to increase bonding</p> <p>Maximum grant is \$1,500.</p>
	<p>The Rockfall Foundation</p> <p><b>Contact:</b> Virginia Rollefson (860) 347-0340</p> <p>Middlesex County Community Foundation</p> <p><b>Contact:</b> Patti Anne Vassia (860) 347-0025</p>	<p>Provides grants related to projects dealing with the environment, safer communities and heritage enhancements (such as historic trails highlighting historic landmarks)</p> <p><b>Applications due each year in September</b></p>	<p>Typical grants range from \$500 to \$3,000.</p>

# Portland Downtown Quarries Master Plan

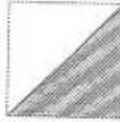
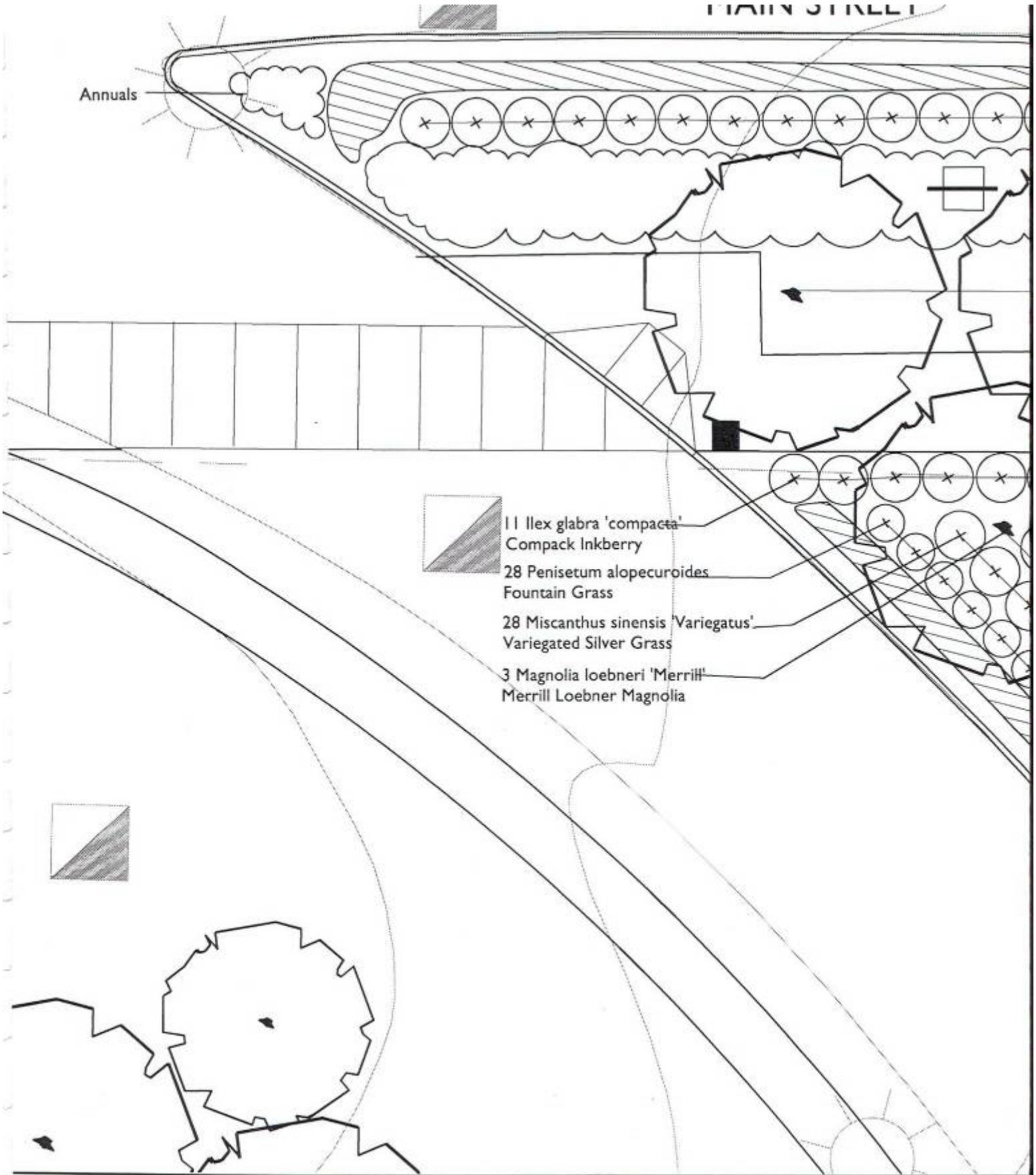
## Street Tree and Median Plant List

Carol R Johnson Associates, Inc.

September 25, 2001

Plant List		
Large Trees		
Sym.	Botanical Name	Common Name
AH	<i>Aesculus hippocastanum</i>	Common Horsechestnut
AR	<i>Acer rubrum 'Red Sunset'</i>	Red Maple
GT	<i>Gleditsia triacanthos 'inermis'</i>	Thornless Honeylocust
KP	<i>Koelreuteria paniculata</i>	Golden Rain Tree
ML	<i>Magnolia loebneri 'Merill'</i>	Merill Loebner Magnolia
PC	<i>Pyrus calleryann</i>	Callery Pear
QR	<i>Quercus rubra</i>	Red Oak
TC	<i>Tilia cordata</i>	Littleleaf Linden
ZS	<i>Zelkova serrata 'Greenvase'</i>	Japanese Zelkova
Shrubs & Grasses		
Sym.	Botanical Name	Common Name
IG	<i>Ilex glabra compacta</i>	Compact Inkberry
MS	<i>Miscanthus sinensis 'Variegatus'</i>	Variegated Silver Grass
PA	<i>Penisetum alopecuroides</i>	Fountain Grass
Shrubs & Grasses		
Sym.	Botanical Name	Common Name
HM	<i>Hemerocallis 'Happy Returns'</i>	Happy Returns Daylily

Annuals



11 *Ilex glabra* 'compacta'  
Compact Inkberry

28 *Penisetum alopecuroides*  
Fountain Grass

28 *Miscanthus sinensis* 'Variegatus'  
Variegated Silver Grass

3 *Magnolia loebneri* 'Merrill'  
Merrill Loebner Magnolia

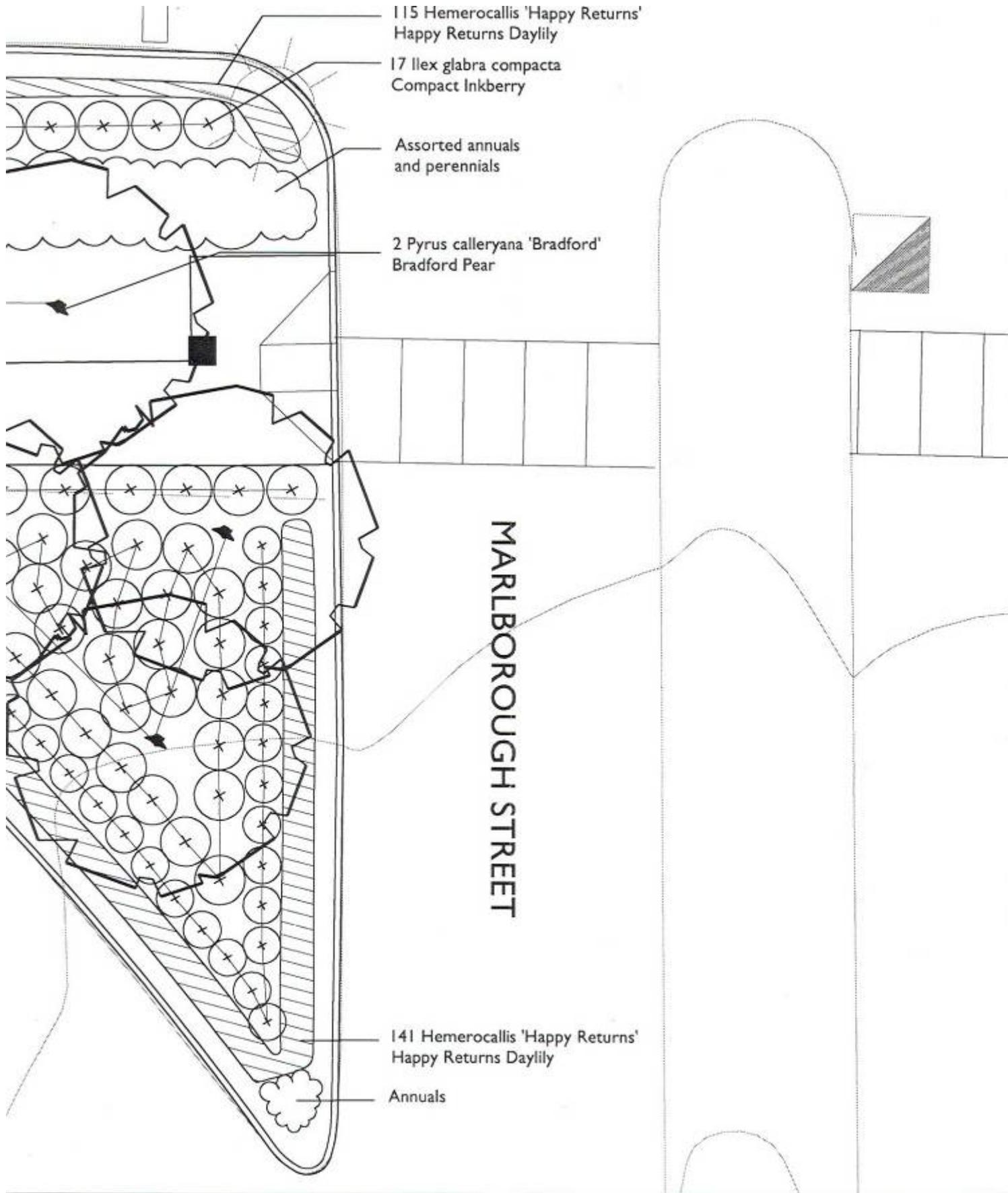


**PORTLAND DOWNTOWN & QUARRIES  
MASTER PLAN**

October 29, 2001

Portland, CT





MEDIAN PLANTING PLAN

C R J : A

## COST ESTIMATE

Project Name: Portland Quarries  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
A. SITE PREPARATION AND DEMOLITION				
B. EARTHWORK				\$10,000.00
C. CURBS AND PAVING				
C.1 CURB AND SIDEWALK				\$181,700.00
C.2 ROADWAY				\$14,900.00
D. SITE IMPROVEMENTS				
D.1 SITE FEATURES				\$521,320.00
D.2 SIGNAGE AND GATEWAYS				\$42,750.00
F. PLANTING AND IRRIGATION				\$48,024.00
<b>Subtotal</b>				<b>\$818,694.00</b>
<b>10% Mobilization and Demobilization</b>				<b>\$81,869.40</b>
<b>15% Design Contingency</b>				<b>\$122,804.10</b>
<b>TOTAL PROJECT COST</b>				<b>\$1,023,367.50</b>

### Cost Estimate Notes

1. This cost estimate is based on CRJA Master Plan dated October 2001, and utilizes 2001 unit prices.
2. The 15% design contingency anticipates items that will require budgets and which will be identified when the design is carried to a greater level of detail than the Master Plan.
3. All costs should be considered budgetary and would be further refined in later project phases.

### CAROL R. JOHNSON ASSOCIATES INC

Landscape Architects	: Environmental Planners
1100 Massachusetts Avenue	: P 617 868 6115
Cambridge, MA 02138	: F 617 864 7890
	www.crja.com

# C R J : A

## COST ESTIMATE

Project Name: Portland Quarries  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>A. SITE PREPARATION AND DEMOLITION</b>				
Subtotal				\$0.00
<b>B. EARTHWORK * includes roadway only</b>				
1 Fine grading and compacting - subgrade areas	8000	SY	\$1.25	\$10,000.00
Subtotal				\$10,000.00
<b>C. CURBS AND PAVING</b>				
<b>C.1 CURB AND SIDEWALK * unit prices include excavation, bases, and finishing</b>				
1 New granite curb	3950	LF	\$30.00	\$118,500.00
2	15800	SF	\$4.00	\$63,200.00
Subtotal				\$181,700.00
<b>C.2 ROADWAY (Full Depth Reconstruction)</b>				
1 Class II bit concrete top base course(2")	149	TON	\$50.00	\$7,450.00
2 Class I bit concrete base course (topcoat for parking lots - 2")	149	TON	\$50.00	\$7,450.00
Subtotal				\$14,900.00

## COST ESTIMATE

Project Name: Portland Quarries  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>D. SITE IMPROVEMENTS</b> *unit prices include footings				
<b>D.1 SITE FEATURES</b>				
1 Trash receptacle	3	EA	\$1,000.00	\$3,000.00
2 Overlook - Paved surface with brownstone block edge	11	LS	\$20,000.00	\$220,000.00
3 Picnic table	11	EA	\$2,120.00	\$23,320.00
4 Canoe launch	1	EA	\$50,000.00	\$50,000.00
5 Floating dock(10' wide)	9000	SF	\$25.00	\$225,000.00
<b>Subtotal</b>				<b>\$521,320.00</b>
<b>D.2 SIGNAGE AND GATEWAYS</b>				
1 Street name	9	EA	\$1,500.00	\$13,500.00
2 Parking sign	15	EA	\$250.00	\$3,750.00
3 Trailhead sign	3	EA	\$3,500.00	\$10,500.00
4 Wayside sign	6	EA	\$2,500.00	\$15,000.00
<b>Subtotal</b>				<b>\$42,750.00</b>
<b>F. PLANTING AND IRRIGATION</b>				
1 Street tree, 2-1/2"-3" caliper	92	EA	\$450.00	\$41,400.00
2 Planting soil	92	EA	\$72.00	\$6,624.00
<b>Subtotal</b>				<b>\$48,024.00</b>

**COST ESTIMATE**

Project Name: Portland Main Street  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
A. SITE PREPARATION AND DEMOLITION				\$400,250.00
B. EARTHWORK				\$363,983.50
C. CURBS AND PAVING				
C.1 CURB AND SIDEWALK				\$837,949.20
C.2 ROADWAY				\$504,118.00
D. SITE IMPROVEMENTS				
D.1 SITE FEATURES				\$420,600.00
D.2 SIGNAGE AND GATEWAYS				\$283,750.00
E. DRAINAGE AND UTILITIES				
E.1 SITE DRAINAGE AND UTILITIES				\$111,600.00
E.2 ELECTRICAL				\$954,380.00
F. PLANTING AND IRRIGATION				\$51,480.00
<b>Subtotal</b>				<b>\$3,928,110.70</b>
<b>10% Mobilization and Demobilization</b>				<b>\$392,811.07</b>
<b>15% Design Contingency</b>				<b>\$589,216.61</b>
<b>Burying Utilities*</b>				<b>\$1,200,000.00</b>
<b>TOTAL PROJECT COST</b>				<b>\$6,110,138.38</b>

**Cost Estimate Notes**

1. This cost estimate is based on CRJA Master Plan dated October 2001, and utilizes 2001 unit prices.
2. The 15% design contingency anticipates items that will require budgets and which will be identified when the design is carried to a greater level of detail than the Master Plan.
3. All costs should be considered budgetary and would be further refined in later project phases.
4. The "Burying Utilities" cost was provided to the CRJA Team by the Town of Portland.

**CAROL R. JOHNSON ASSOCIATES INC**

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Cambridge, MA 02138	:	F 617 864 7890
		<a href="http://www.crja.com">www.crja.com</a>

# C R J : A

## COST ESTIMATE

Project Name: Portland Main Street  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>A. SITE PREPARATION AND DEMOLITION</b>				
1 Remove & dispose cement conc pavement	22400	SF	\$1.50	\$33,600.00
2 Remove & dispose cement conc curb	5200	LF	\$3.00	\$15,600.00
3 Remove & dispose bituminous concrete	166400	SF	\$2.00	\$332,800.00
4 Remove tree and stump	9	EA	\$350.00	\$3,150.00
5 Remove & dispose concrete planters	1	LS	\$0.00	\$0.00
6 Remove & return/dispose ex. cobrahead light (LPB)	23	EA	\$500.00	\$11,500.00
7 Remove & dispose existing timber planter	12	EA	\$300.00	\$3,600.00
<b>Subtotal</b>				<b>\$400,250.00</b>
<b>B. EARTHWORK * includes roadway only</b>				
1 3/4" crushed stone for drainage & bases(8")	5759	CY	\$25.00	\$143,975.00
2 Fine grading and compacting - subgrade areas	23890	SY	\$1.25	\$29,862.50
3 Dense graded crushed stone for sub-base(12")	8643	CY	\$22.00	\$190,146.00
<b>Subtotal</b>				<b>\$363,983.50</b>
<b>C. CURBS AND PAVING</b>				
<b>C.1 CURB AND SIDEWALK * unit prices include excavation, bases, and finishing</b>				
1 New granite curb	9470	LF	\$30.00	\$284,100.00
2 4" depth cement concrete pavement (not reinf.)(8' wide)	17955	SF	\$4.00	\$71,820.00
3 6" depth cement concrete pavement (not reinf.)(vehicular)	7440	SF	\$5.00	\$37,200.00
4 Brick pavers on cement concrete base / pedestrian	21423	SF	\$20.40	\$437,029.20
5 Accessible curb ramp	26	EA	\$300.00	\$7,800.00
<b>Subtotal</b>				<b>\$837,949.20</b>
<b>C.2 ROADWAY (Full Depth Reconstruction)</b>				
1 Line striping and pavement graphics	1	LS	\$10,000.00	\$10,000.00
2 Concrete pressed crosswalk(6")	1920	SF	\$20.00	\$38,400.00
3 Class IV bit concrete base course(base coat for state roads - 6")	5557	TON	\$50.00	\$277,850.00
4 Class II bit concrete top base course(base coat for parking lots - 2")	385	TON	\$50.00	\$19,250.00
5 Class I bit concrete base course (topcoat for state streets - 3"; topcoat for parking lots - 2")	3163	TON	\$50.00	\$158,150.00
6 Hot poured rubberized asphalt sealer	2600	LF	\$0.18	\$468.00
<b>Subtotal</b>				<b>\$504,118.00</b>

COST ESTIMATE

Project Name: Portland Main Street  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>D. SITE IMPROVEMENTS</b> *unit prices include footings				
<b>D.1 SITE FEATURES</b>				
1 Tree grate	176	EA	\$1,000.00	\$176,000.00
2 4' bench (assume 2 every 200')	48	EA	\$1,200.00	\$57,600.00
3 Trash receptacle	15	EA	\$1,000.00	\$15,000.00
4 Bike Rack	10	EA	\$200.00	\$2,000.00
<b>Subtotal</b>				<b>\$420,600.00</b>
<b>D.2 SIGNAGE AND GATEWAYS</b>				
1 Large brownstone pier	6	EA	\$15,000.00	\$90,000.00
2 Small brownstone pier	8	EA	\$10,000.00	\$80,000.00
3 Town gate entrance(sandblasting)	4	EA	\$400.00	\$1,600.00
4 Town gate entrance(freestanding sign)	1	EA	\$4,000.00	\$4,000.00
5 Gate entrance	6	EA	\$300.00	\$1,800.00
6 Street name	9	EA	\$1,500.00	\$13,500.00
7 Directional signs	5	EA	\$1,500.00	\$7,500.00
8 Traffic control sign	10	EA	\$300.00	\$3,000.00
9 Parking sign	15	EA	\$250.00	\$3,750.00
10 Reset existing regulatory and traffic signage (assume 30% of existing meet spec & are reused)	1	LS	\$4,000.00	\$4,000.00
<b>Subtotal</b>				<b>\$283,750.00</b>

# C R J : A

## COST ESTIMATE

Project Name: Portland Main Street  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>E. DRAINAGE AND UTILITIES</b>				
<b>E.1 SITE DRAINAGE AND UTILITIES</b>				
1 Catch basin	29	EA	\$1,800.00	\$52,200.00
2 Manhole	10	EA	\$2,500.00	\$25,000.00
3 Manhole - special utility structure	1	EA	\$10,000.00	\$10,000.00
4 Relocate existing hydrant (HYD)	4	EA	\$1,100.00	\$4,400.00
5 Adjust existing utilities to grade	1	LS	\$20,000.00	\$20,000.00
<b>Subtotal</b>				<b>\$111,600.00</b>
<b>E.2 ELECTRICAL</b>				
1 Street light (250 watt MH)(120' oc)	43	EA	\$7,200.00	\$309,600.00
2 Pedestrian light (175 watt ML)(40' oc)	87	EA	\$5,200.00	\$452,400.00
3 Electrical load center (Lighting Cabinet)	2	EA	\$10,000.00	\$20,000.00
4 Handhole, 12" x 22" x 36" D	130	EA	\$800.00	\$104,000.00
5 3/4" diam x 8 ft. long CW ground rod	130	EA	\$70.00	\$9,100.00
6 Exothermic weld, grnd wire to rod	130	EA	\$60.00	\$7,800.00
7 Receptacles at trees	88	EA	\$585.00	\$51,480.00
<b>Subtotal</b>				<b>\$954,380.00</b>
<b>F. PLANTING AND IRRIGATION</b>				
1 Street tree, 2-1/2"-3" caliper	294	EA	\$450.00	\$132,300.00
2 Planting soil per tree pit (assume 4' x 8' x 2-1/2')	294	EA	\$72.00	\$21,168.00
3 Underdrainage for tree	5200	LF	\$15.00	\$78,000.00
4 Irrigation for trees including controllers	2	LS	\$75,000.00	\$150,000.00
<b>Subtotal</b>				<b>\$51,480.00</b>

# C R J : A

## COST ESTIMATE

Project Name: Portland Downtown and Quarries  
Submission: Master Plan  
Date: September 20, 2001

### Project Adds and Deducts

#### Add

- |  |                     |
|--|---------------------|
| 1 Public Art   | \$30,000 - \$50,000 |
| 2 Substitute structured boardwalk with anchored footings for floating dock in Quarries | \$200,000           |

#### Deduct

- |   |            |
|---|------------|
| 1 Remove tree grates, substitute bark mulch   | -\$176,000 |
| 2 Remove full depth reconstruction (\$729,000 - \$1,033,680)<br>Substitute mill and overlay | -\$304,680 |

# C R J A

## COST ESTIMATE

Project Name: Portland Town Green  
 Submission: Master Plan  
 Date: October 17, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
A. SITE PREPARATION AND DEMOLITION				\$103,446.00
B. EARTHWORK				\$87,040.00
C. CURBS AND PAVING				
C.1 CURB AND SIDEWALK				\$96,780.00
C.2 ROADWAY				\$67,500.00
D. SITE IMPROVEMENTS				
D.1 SITE FEATURES				\$79,200.00
D.2 SIGNAGE				\$1,000.00
E. DRAINAGE AND UTILITIES				
E.1 SITE DRAINAGE AND UTILITIES				\$16,700.00
E.2 ELECTRICAL				\$161,600.00
F. PLANTING AND IRRIGATION				\$53,750.00
<b>Subtotal</b>				\$667,016.00
<b>10% Mobilization and Demobilization</b>				\$66,701.60
<b>15% Design Contingency</b>				\$100,052.40
<b>TOTAL PROJECT COST</b>				<b>\$833,770.00</b>

### Cost Estimate Notes

1. This cost estimate is based on CRJA Master Plan dated October 2001, and utilizes 2001 unit prices.
2. The 15% design contingency anticipates items that will require budgets and which will be identified when the design is carried to a greater level of detail than the Master Plan.
3. All costs should be considered budgetary and would be further refined in later project phases.

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# C R J : A

## COST ESTIMATE

Project Name: Portland Town Green  
 Submission: Master Plan  
 Date: October 17, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>A. SITE PREPARATION AND DEMOLITION</b>				
1 Remove & dispose bituminous concrete	51723	SF	\$2.00	\$103,446.00
<b>Subtotal</b>				<b>\$103,446.00</b>
<b>B. EARTHWORK</b>				
1 3/4" crushed stone for drainage & bases	1300	CY	\$25.00	\$32,500.00
2 Fine grading and compacting - subgrade areas	14000	SY	\$1.25	\$17,500.00
3 Dense graded crushed stone	620	CY	\$22.00	\$13,640.00
4 Gravel borrow	1300	CY	\$18.00	\$23,400.00
<b>Subtotal</b>				<b>\$87,040.00</b>
<b>C. CURBS AND PAVING</b>				
<b>C.1 CURB AND SIDEWALK</b>				
1 New granite curb	1550	LF	\$30.00	\$46,500.00
2 4" depth cement concrete pavement(not reinf., incl base)	8400	SF	\$4.00	\$33,600.00
3 Accessible curb ramp	4	EA	\$300.00	\$1,200.00
4 Safety surfacing at playground	1800	SF	\$8.00	\$14,400.00
5 Timber edging at playground	180	LF	\$6.00	\$1,080.00
<b>Subtotal</b>				<b>\$96,780.00</b>
<b>C.2 ROADWAY (Full Depth Reconstruction)</b>				
1 Line striping and pavement graphics	1	LS	\$2,500.00	\$2,500.00
3 Class II bit concrete top base course(2")	650	TON	\$50.00	\$32,500.00
4 Class I bit concrete base course (topcoat for parking lots - 2")	650	TON	\$50.00	\$32,500.00
<b>Subtotal</b>				<b>\$67,500.00</b>
<b>D. SITE IMPROVEMENTS *unit prices include footings</b>				
<b>D.1 SITE FEATURES</b>				
1 Move gazebo (twice)	1	LS	\$6,000.00	\$6,000.00
2 4' bench	6	EA	\$1,200.00	\$7,200.00
3 Trash receptacle	6	EA	\$1,000.00	\$6,000.00
4 Ornamental fence	250	LF	\$100.00	\$25,000.00
5 New play structure	1	LS	\$35,000.00	\$35,000.00
<b>Subtotal</b>				<b>\$79,200.00</b>
<b>D.2 SIGNAGE</b>				
1 Parking sign	4	EA	\$250.00	\$1,000.00
<b>Subtotal</b>				<b>\$1,000.00</b>
<b>E. DRAINAGE AND UTILITIES</b>				
<b>E.1 SITE DRAINAGE AND UTILITIES</b>				
1 Catch basin	4	EA	\$1,800.00	\$7,200.00
2 Manhole	2	EA	\$2,500.00	\$5,000.00
3 Piping	150	LF	\$30.00	\$4,500.00
<b>Subtotal</b>				<b>\$16,700.00</b>

# C R J : A

## COST ESTIMATE

Project Name: Portland Town Green  
 Submission: Master Plan  
 Date: October 17, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>E.2 ELECTRICAL</b>				
1 Street light (250 watt MH)	8	EA	\$7,200.00	\$57,600.00
2 Pedestrian light (175 watt MH)	20	EA	\$5,200.00	\$104,000.00
<b>Subtotal</b>				<b>\$161,600.00</b>
<b>F. PLANTING AND IRRIGATION</b>				
1 Street tree, 2-1/2"-3" caliper	35	EA	\$450.00	\$15,750.00
2 Lawn (seed)	1	LS	\$8,000.00	\$8,000.00
3 Shrubs	1	LS	\$15,000.00	\$15,000.00
4 Irrigation	1	LS	\$15,000.00	\$15,000.00
<b>Subtotal</b>				<b>\$53,750.00</b>

# C R J : A

COST ESTIMATE

Project Name: Portland Riverfront  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
A. SITE PREPARATION AND DEMOLITION				\$198,160.00
B. EARTHWORK				\$441,899.25
C. CURBS AND PAVING				
C.1 CURB AND SIDEWALK				\$469,133.00
C.2 ROADWAY				\$208,222.00
D. SITE IMPROVEMENTS				
D.1 SITE FEATURES				\$1,200,200.00
D.2 SIGNAGE AND GATEWAYS				\$1,224,800.00
E. DRAINAGE AND UTILITIES				
E.1 SITE DRAINAGE AND UTILITIES				\$42,300.00
E.2 ELECTRICAL				\$840,060.00
F. PLANTING AND IRRIGATION				\$118,655.20
<b>Subtotal</b>				<b>\$4,743,429.45</b>
<b>10% Mobilization and Demobilization</b>				<b>\$474,342.95</b>
<b>15% Design Contingency</b>				<b>\$711,514.42</b>
<b>TOTAL PROJECT COST</b>				<b>\$5,929,286.81</b>

**Cost Estimate Notes**

1. This cost estimate is based on CRJA Master Plan dated October 2001, and utilizes 2001 unit prices.
2. The 15% design contingency anticipates items that will require budgets and which will be identified when the design is carried to a greater level of detail than the Master Plan.
3. All costs should be considered budgetary and would be further refined in later project phases.
4. This carries no budget for the removal/treatment of hazardous materials.

**CAROL R JOHNSON ASSOCIATES INC**

Landscape Architects : Environmental Planners  
 1100 Massachusetts Avenue : P 617 868 6115  
 Cambridge, MA 02138 : F 617 864 7890  
 www.crja.com

Project Name: Portland Riverfront  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>A. SITE PREPARATION AND DEMOLITION</b>				
1 Clearing and grubbing	17	AC	\$4,000.00	\$68,000.00
2 Stripping and stockpiling of loam	10880	CY	\$7.00	\$76,160.00
3 Construction fence(6' CLF)	5400	LF	\$10.00	\$54,000.00
Subtotal				\$198,160.00
<b>B. EARTHWORK</b>				
1 3/4" crushed stone for drainage & bases(8")	5261	CY	\$25.00	\$131,525.00
2 Fine grading and compacting - subgrade areas	65277	SY	\$1.25	\$81,596.25
3 Unclassified excavation(amphiteater)	4587	CY	\$12.00	\$55,044.00
3 Dense graded crushed stone for sub-base(12")	7897	CY	\$22.00	\$173,734.00
Subtotal				\$441,899.25
<b>C. CURBS AND PEDESTRIAN PAVING</b>				
C.1 CURB AND SIDEWALK * unit prices include excavation, bases, and finishing				
1 New granite curb	5200	LF	\$30.00	\$156,000.00
2 4" depth cement concrete pavement (not reinf.)(8' wide)	6500	SF	\$3.00	\$19,500.00
3 6" depth cement concrete pavement (not reinf.)	192	SF	\$4.00	\$768.00
4 Brick pavers on cement concrete base (2' wide & special paving)	10012	SF	\$20.00	\$200,240.00
5 Stabilized stone dust	27300	SF	\$3.25	\$88,725.00
6 Accessible curb ramp	13	EA	\$300.00	\$3,900.00
Subtotal				\$469,133.00
C.2 ROADWAY AND PARKING				
1 Line striping and pavement graphics	1	LS	\$10,000.00	\$10,000.00
2 Class II bit concrete top course(2")	1977	TON	\$50.00	\$98,850.00
3 Class I bit concrete base course(2")	1977	TON	\$50.00	\$98,850.00
4 Hot poured rubberized asphalt sealer	2900	LF	\$0.18	\$522.00
Subtotal				\$208,222.00
<b>D. SITE IMPROVEMENTS *unit prices include footings</b>				
D.1 SITE FEATURES				
1 4' bench	10	EA	\$1,200.00	\$12,000.00
2 Trash receptacle (assume 1 per block if no exist.)	6	EA	\$1,000.00	\$6,000.00
3 Bike Rack	4	EA	\$200.00	\$800.00
4 Overlook - Paved surface with brownstone block edge	1	LS	\$20,000.00	\$20,000.00
5 Amphitheater concrete	859	CY	\$800.00	\$687,200.00
6 Picnic Table	10	EA	\$2,120.00	\$21,200.00
7 Brownstone block bench (Reuse existing from scrap)	10	EA	\$500.00	\$5,000.00
8 Boat Ramp	1	LS	\$100,000.00	\$100,000.00
9 Boardwalk(8' wide)	4800	SF	\$75.00	\$360,000.00
Subtotal				\$1,200,200.00

# C R J : A

COST ESTIMATE

Project Name: Portland Riverfront  
 Submission: Master Plan  
 Date: October 11, 2001

Item/Task	Quantity	Unit	Unit Price	Subtotal
<b>D.2 SIGNAGE AND GATEWAYS</b>				
1 Directional sign	2	EA	\$1,500.00	\$3,000.00
2 Traffic control sign	2	EA	\$300.00	\$600.00
3 Parking sign	8	EA	\$250.00	\$2,000.00
4 Trailhead sign	2	EA	\$3,500.00	\$7,000.00
<b>Subtotal</b>				<b>\$1,224,800.00</b>
<b>E. DRAINAGE AND UTILITIES</b>				
<b>E.1 SITE DRAINAGE AND UTILITIES</b>				
1 Catch basin	11	EA	\$1,800.00	\$19,800.00
2 Manhole	3	EA	\$2,500.00	\$7,500.00
3 Manhole - special utility structure	1	EA	\$10,000.00	\$10,000.00
4 Hydrant	2	EA	\$2,500.00	\$5,000.00
<b>Subtotal</b>				<b>\$42,300.00</b>
<b>E.2 ELECTRICAL</b>				
1 Street light (250 watt MH)(120' oc)	15	EA	\$7,160.00	\$107,400.00
2 Pedestrian light (175 watt MH)(40' oc)	107	EA	\$5,185.00	\$554,795.00
3 Electrical load center (Lighting Cabinet)	1	EA	\$10,000.00	\$10,000.00
4 Handhole, 12" x 22" x 36" D	122	EA	\$800.00	\$97,600.00
5 3/4" diam x 8 ft. long CW ground rod	122	EA	\$70.00	\$8,540.00
6 Exothermic weld, grd wire to rod	122	EA	\$60.00	\$7,320.00
7 Receptacles at trees	93	EA	\$585.00	\$54,405.00
<b>Subtotal</b>				<b>\$840,060.00</b>
<b>G. PLANTING AND IRRIGATION</b>				
1 Deciduous tree, 2-1/2"-3" caliper	186	EA	\$450.00	\$83,700.00
2 Planting soil per tree pit (assume 4' x 8' x 2-1/2')	186	EA	\$72.00	\$13,392.00
3 Habitat restoration planting	0.31	AC	\$37,220.00	\$11,538.20
4 Meadow seed	15700	SF	\$0.20	\$3,140.00
5 Lawn seed	45900	SF	\$0.15	\$6,885.00
<b>Subtotal</b>				<b>\$118,655.20</b>

# C R J : A

## MEMORANDUM

To: Susan Decina Date: October 11, 2001  
Company: Town of Portland

---

Fax:

Project Name: Portland Downtown and Quarries MP Project No: M1077  
RE: Cut Sheets for Street Furnishings File Code:  
From: Jennifer McLaughlin  
Copy to: Pam Shadley

Susan,

I have attached the cut sheets for the street lights, pedestrian lights, trash receptacles, benches and bike racks that have been specified in the Master Plan for the Portland Downtown and Quarries. The product, manufacturer, representative and contact information is listed below:

Lighting – Antique Street Lamps

Representative - *Gayle Hood*

860.721.1900

Spectro Lume Inc.

Wethersfield, CT 06109

Street Lamp

NY 15A/20 – CIS/BK

ASC30 – CA/BK

EAT23FB/BK-M100/QV

Pedestrian Lamp

NY11.33/17 – CIS/BK

AAT23FB/BK – M150/QV

Bench/Trash Receptacle – DuMor Inc.

Representative – *Fred Balet*

860.568.8222

DuMor, inc.

Medfield, MA

Trash Receptacle

84-32 Black

Bench

58 Series Black

Bike Rack – BRP

Representative – *Maggie Wood*

888.438.5311

BRP Enterprises, Inc.

Lincoln, NE

Bike Rack Loop

LL-02-PF (Black)

CAROL R. JOHNSON ASSOCIATES INC

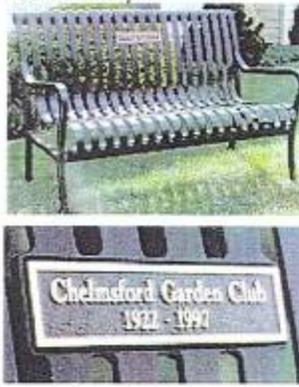
Landscape Architects • Environmental Planners  
• P 617 896 2200  
• F 617 896 2340  
Boston, MA 02110-2022  
www.cra.com

SCHEMATIC DESIGN • Site Materials Palette

Bench



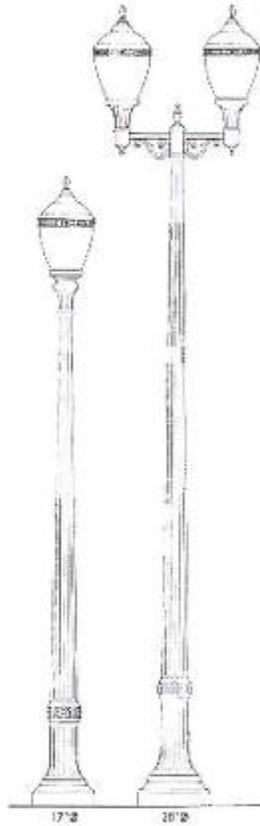
Bench Plaque



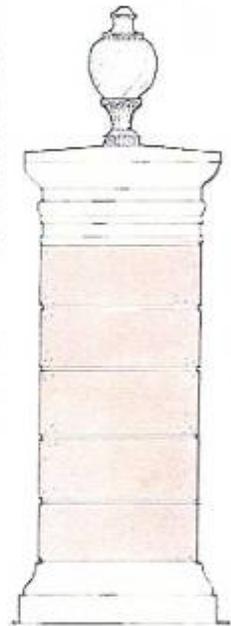
Trash Receptacle



Light Fixture



Gateway Piers and Quarry Linkage Indicators



Paving



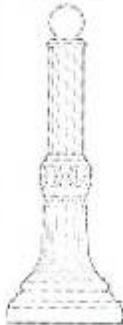
Site Features



Bike Rack



Bollard

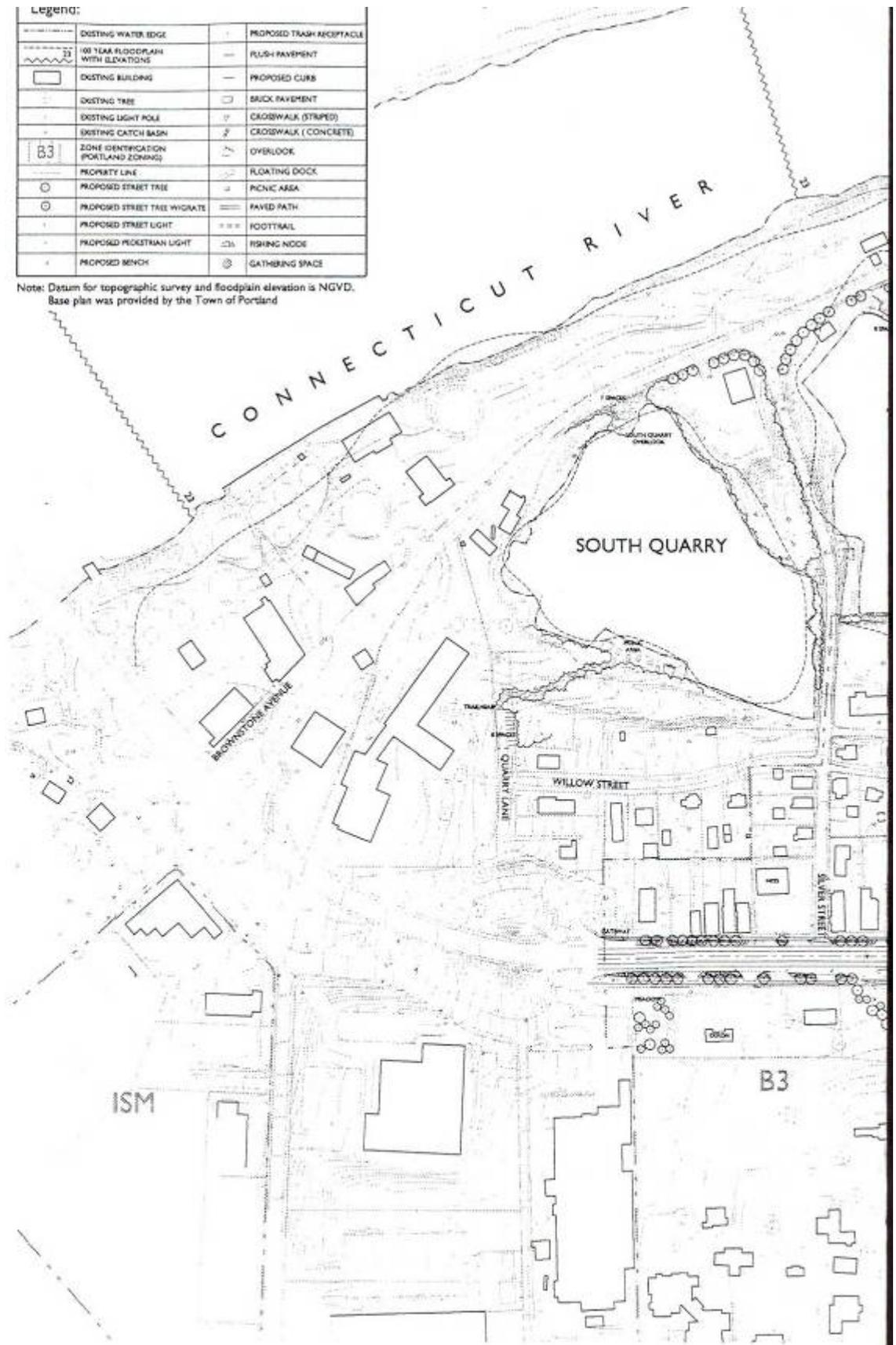


Town Seal



Legend:		
	EXISTING WATER EDGE	PROPOSED TRASH RECEPTACLE
	100 YEAR FLOODPLAIN WITH ELEVATIONS	FLUSH PAVEMENT
	EXISTING BUILDING	PROPOSED CURB
	EXISTING TREE	BRICK PAVEMENT
	EXISTING LIGHT POLE	CROSSWALK (STRIPED)
	EXISTING CATCH BASIN	CROSSWALK (CONCRETE)
	ZONE IDENTIFICATION (PORTLAND ZONING)	OVERLOOK
	PROPERTY LINE	FLOATING DOCK
	PROPOSED STREET TREE	PICNIC AREA
	PROPOSED STREET TREE WIGWAG	PAVED PATH
	PROPOSED STREET LIGHT	FOOTTRAIL
	PROPOSED PEDESTRIAN LIGHT	FISHING NODE
	PROPOSED BENCH	GATHERING SPACE

Note: Datum for topographic survey and floodplain elevation is NGVD.  
Base plan was provided by the Town of Portland



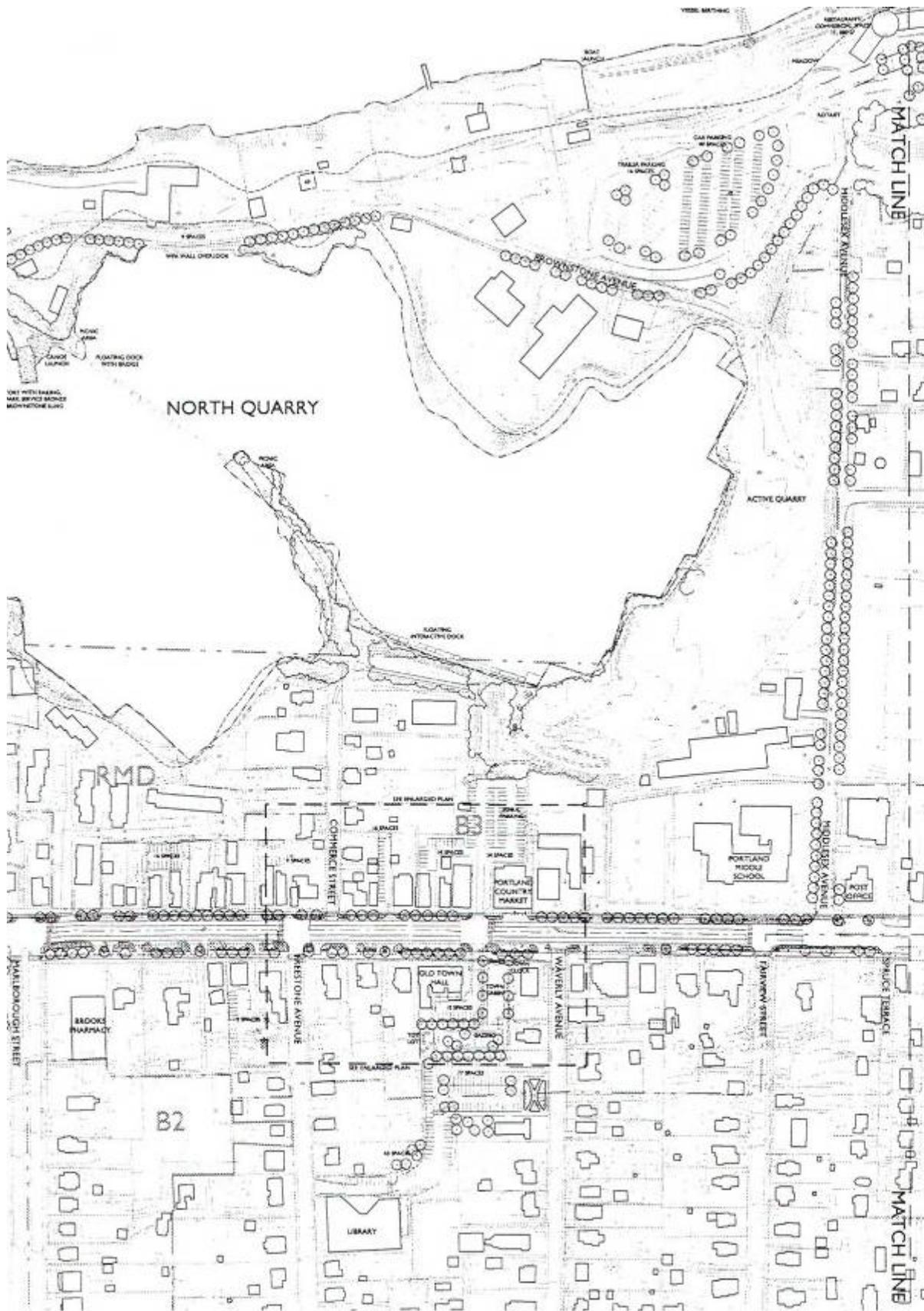
# PORTLAND DOWNTOWN & QUARRIES MASTER PLAN

Portland, CT

October 29, 2001



Design Team  
Vanasse H  
Bartram &  
Bargmann  
Haley & A  
Jon Roll &



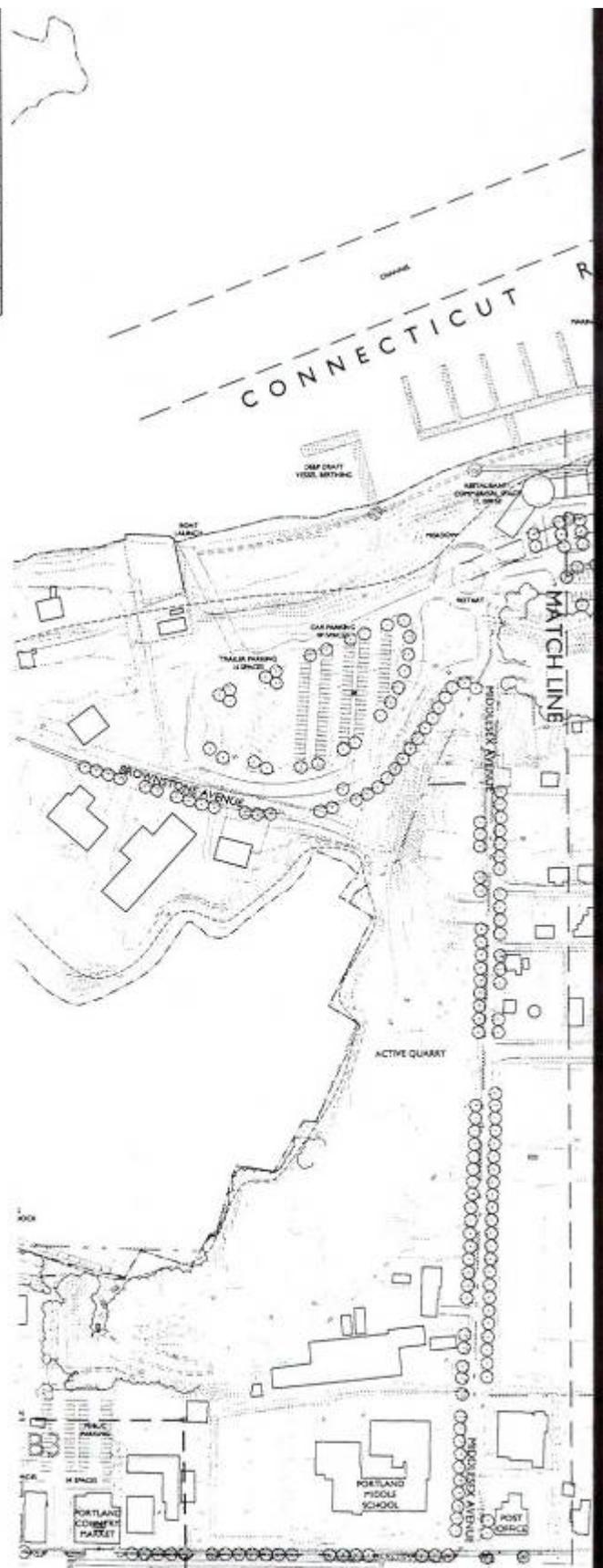
in Brustlin, Inc., Middletown, CT  
 thran, Farmington, CT  
 drie + Archetype, Inc., Boston, MA  
 h, Inc., Glastonbury, CT  
 ociates, Cambridge, MA

**C R J : A**

CAROL R JOHNSON ASSOCIATES INC Boston, MA  
 Landscape Architects and Environmental Planners

Legend		
	EXISTING WATER EDGE	PROPOSED TRASH RECEPTACLE
	100 YEAR FLOODPLAIN WITH ELEVATIONS	RUSH PAVEMENT
	EXISTING BUILDING	PROPOSED CURB
	EXISTING TREE	BRICK PAVEMENT
	EXISTING LIGHT POLE	CROSSWALK (STRIPES)
	EXISTING CATCH BASIN	CROSSWALK (CONCRETE)
	ZONE IDENTIFICATION (PORTLAND ZONING)	OVERLOOK
	PROPERTY LINE	FLGATING DOCK
	PROPOSED STREET TREE	PICNIC AREA
	PROPOSED STREET TREE HYDRATE	PAVED PATH
	PROPOSED STREET LIGHT	FOOTTRAIL
	PROPOSED INDUSTRIAL LIGHT	FISHING NOOE
	PROPOSED BENCH	GATHERING SPACE

Note: Datum for topographic survey and floodplain elevation is NGVD.  
Base plan was provided by the Town of Portland



# PORTLAND DOWNTOWN & QUARRIES MASTER PLAN

Portland, CT

October 29, 2001

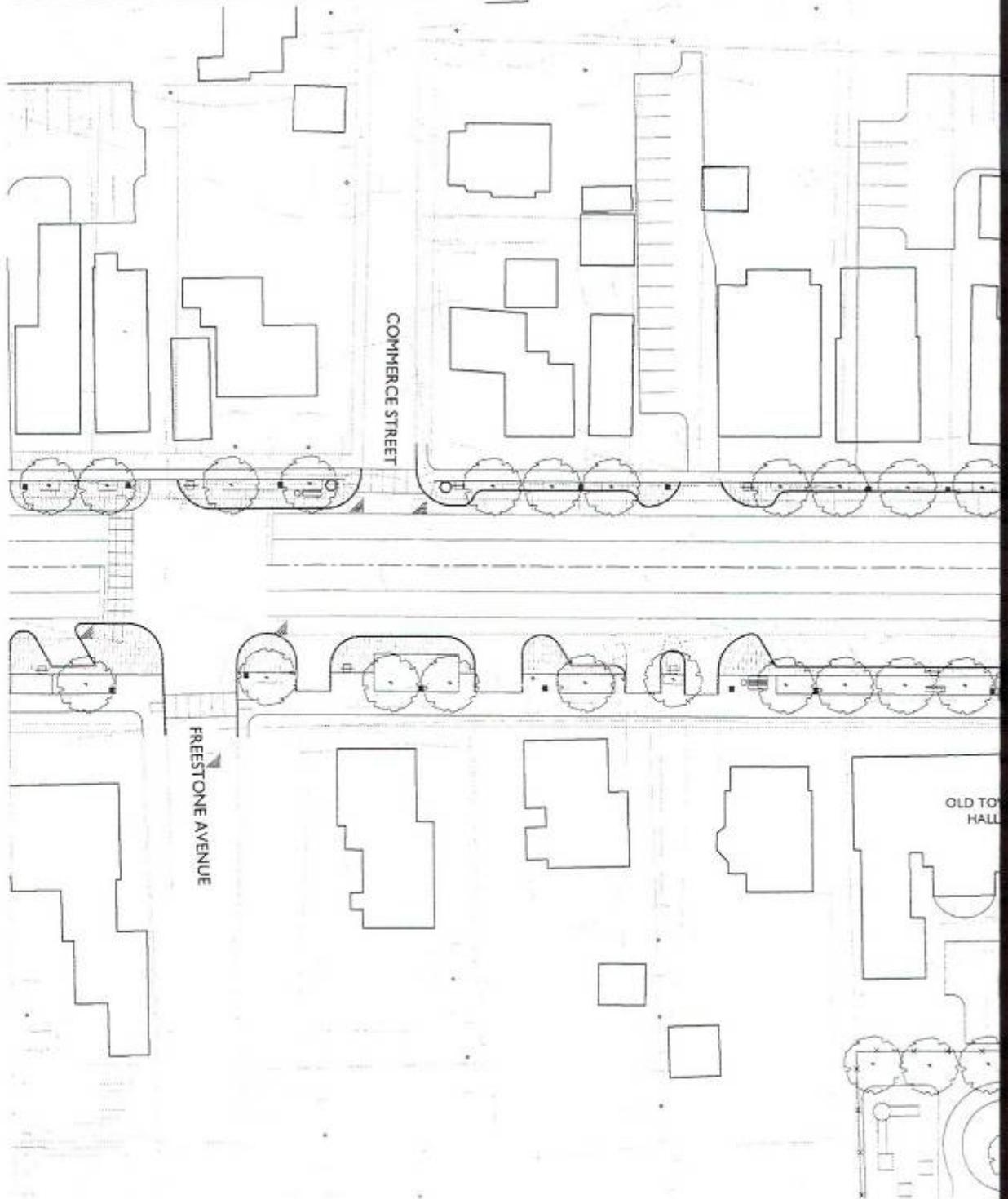


Design  
Vanass  
Bartran  
Bargma  
Haley  
Jon Ro



Proposed Materials Legend:

	STREET TREE		TRASH RECEPTACLE
	STREET TREE WITH TREE GRATE		FLUSH PAVEMENT
	STREET LIGHT		CURB
	PEDESTRIAN LIGHT		BRICK PAVEMENT
	BENCH		CROSS WALK



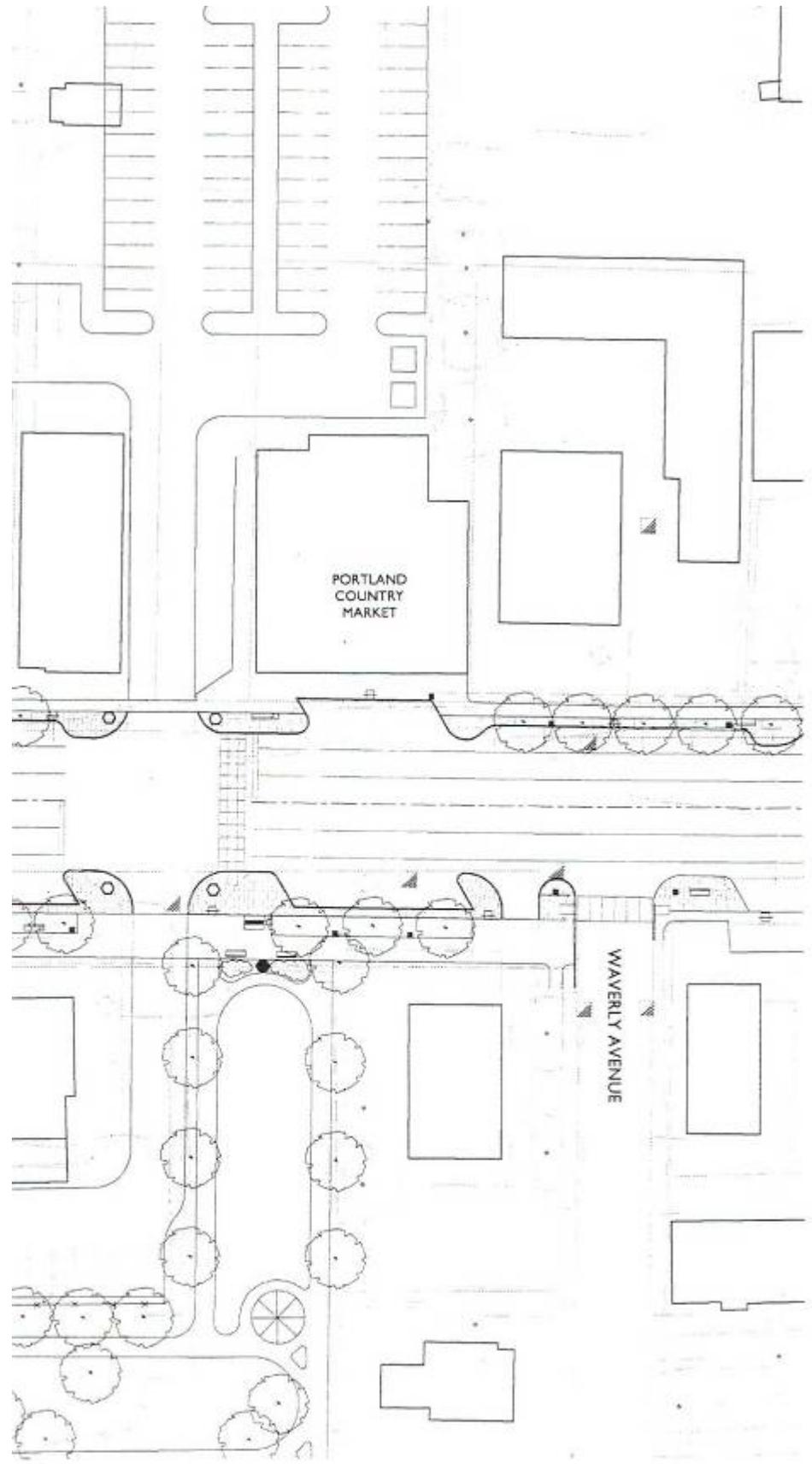
PORTLAND DOWNTOWN & QUARRIES  
MASTER PLAN

Portland, CT

October 29, 2001



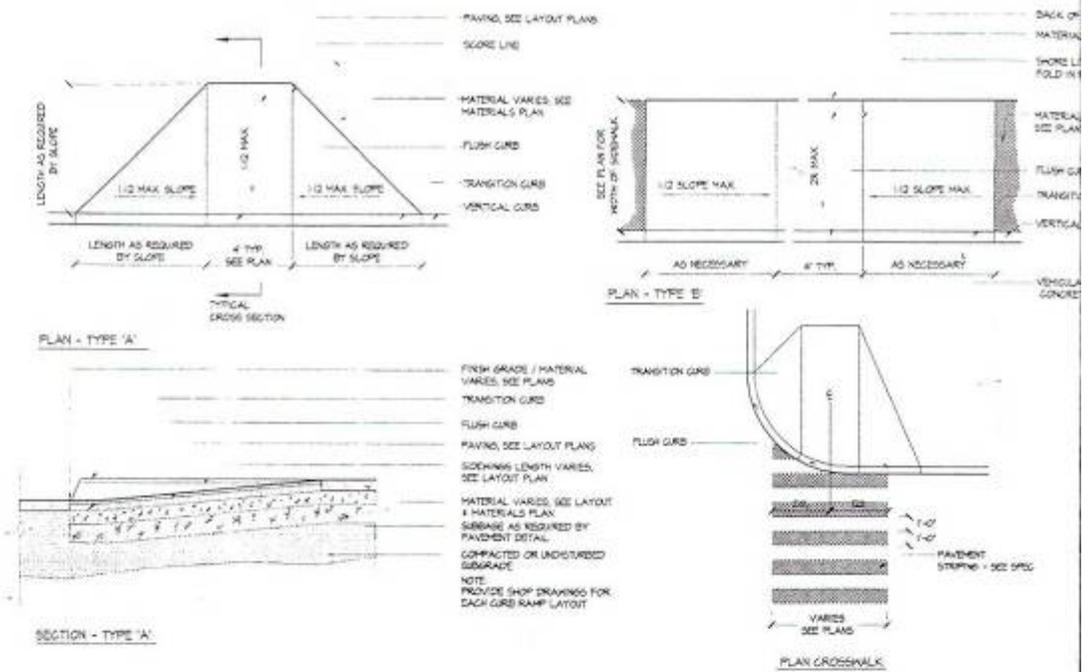
Design Team:  
Vanasse Hangen Brustlin, Inc.,  
Bartram & Cochran, Farmington  
Bargmann Hendrie + Archetype  
Haley & Aldrich, Inc., Glastonbury  
Jon Roll & Associates, Cambridge



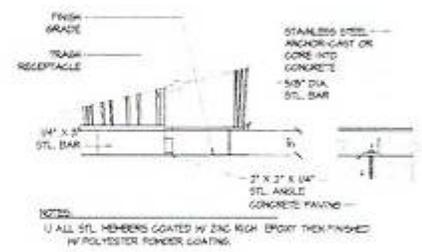
Stetson, CT  
Boston, MA  
CT  
MA

C R J : A

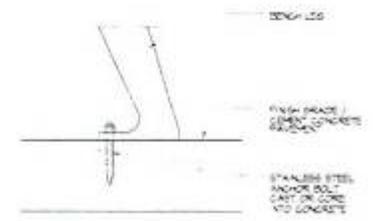
CAROL R JOHNSON ASSOCIATES INC Boston, MA  
Landscape Architects and Environmental Planners



**11 HANDICAP RAMP AND CROSSWALK**  
SCALE: N.T.S.



**12 TRASH RECEPTACLE FOOTING**  
SCALE: N.T.S.

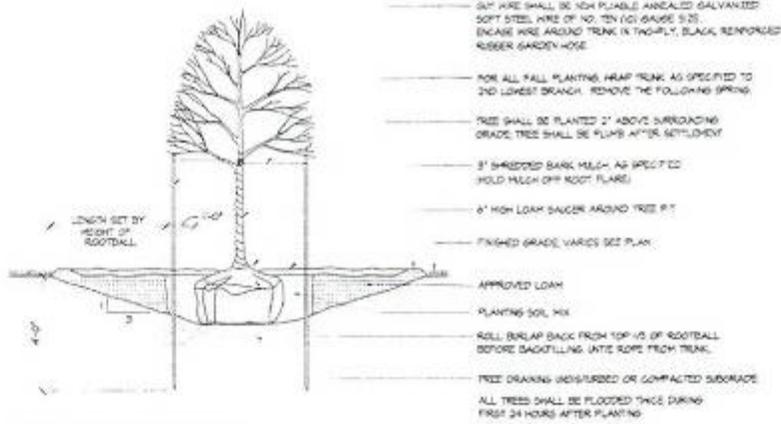


**13 BENCH SURFACE MOUNT**  
SCALE: 2"=1'-0"

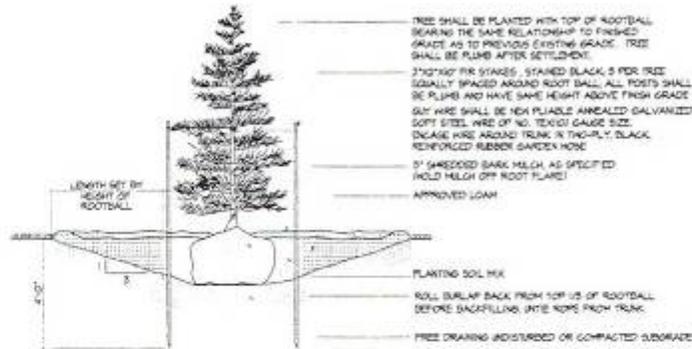




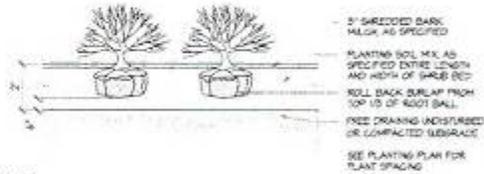
BE PLUMB AND HAVE SAME HEIGHT ABOVE FINISH GRADE



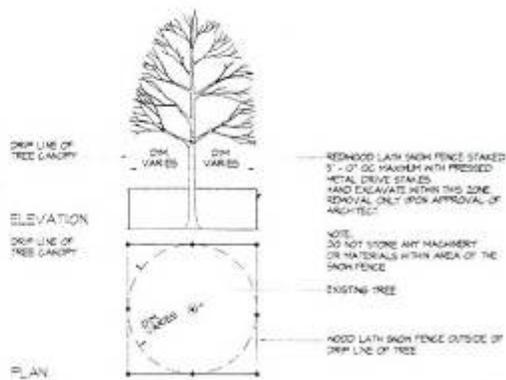
1 DECIDUOUS TREE  
SCALE: N.T.S.



2 EVERGREEN TREE  
SCALE: N.T.S.

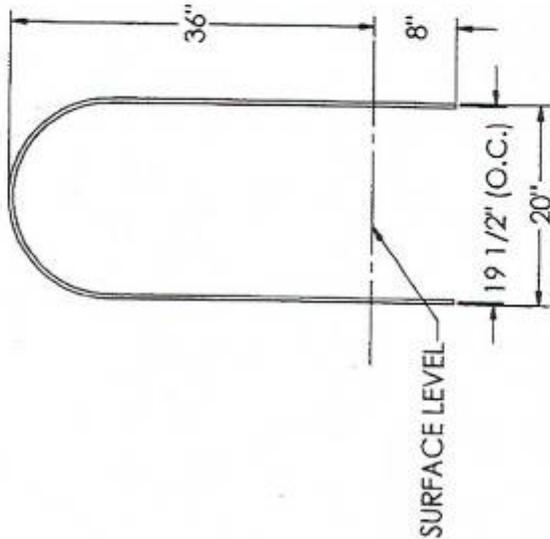
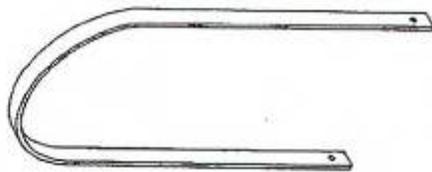


3 SHRUB  
SCALE: N.T.S.



4 TREE PROTECTION  
SCALE: N.T.S.

MATERIALS:  
Frame  
1/2" x 2" Steel Flat Bar



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E-MAIL: [info@brponline.com](mailto:info@brponline.com)  
PF: 888/438-5311 (402/438-5311)  
FX: 888/438-5312 (402/438-5349)

DWG. NO.

LL-02 (P)

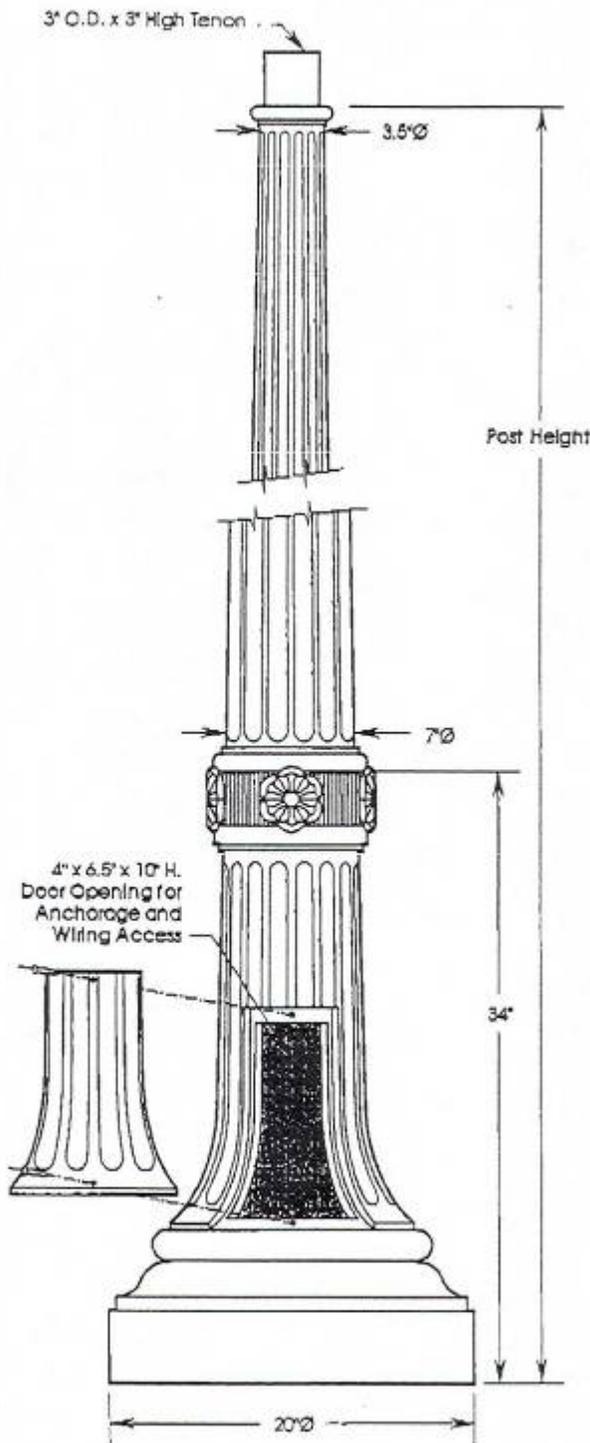
DR.	LPK	DATE	03/23/01	TITLE
INCH TOLERANCES UNLESS OTHERWISE STATED				SEE MATERIALS LIST
FRACTIONS -- ± 1/16"				
ANG. ----- ± 1°				

LOOPLINE  
BIKE RACK

**BRP ENTERPRISES, INC.**  
3200 "O" STREET  
LINCOLN, NE 68510 USA

# NEW YORK Series

Cast Iron Posts • 20" dia. base • narrow taper



## ORDERING INFORMATION

Choose the **boldface** catalog nomenclature that best suits your needs and write it on the appropriate line.

Example: **PI NY20 12A ANPP** Options

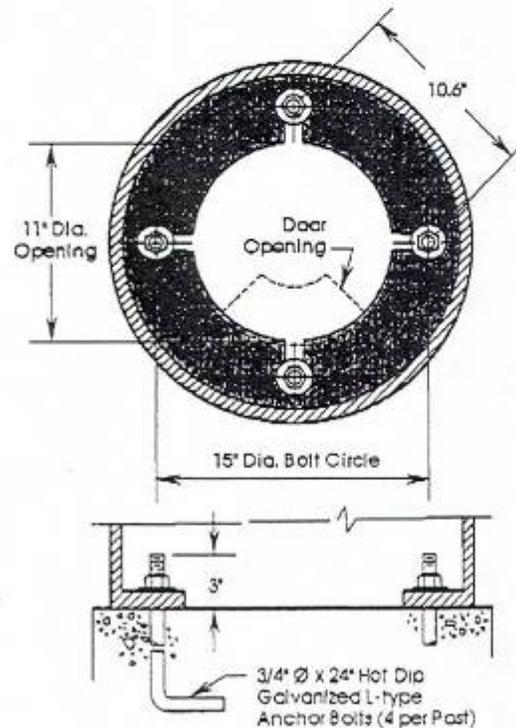
Post Series	Height	Finish <sup>1</sup>
<b>PI NY20</b>	<b>12A</b>	<b>ANPP</b> Prime Painted
Post. Cast Iron	<b>15A</b>	<b>ANBK</b> Black
		<b>ANDB</b> Dark Bronze
		<b>ANDG</b> Dark Green
<b>NEW YORK</b>		<b>ANVC</b> Verde Green
<b>20" base</b>		<b>CM</b> Custom Match
		<b>CS</b> Custom Select
		RAL colors

### Options

- \_\_\_\_\_ Receptacles
  - \_\_\_\_\_ Banner Arms
  - \_\_\_\_\_ Flagpole Holders
  - \_\_\_\_\_ Custom Logos
  - \_\_\_\_\_ Signage
- (see Signage & Accessories section in the catalog or contact Antique Street Lamps)

**NOTES:**  
 1. For finish specifications and color options, see **FINISH** section in catalog or contact Antique Street Lamps.

## ANCHORAGE GUIDE

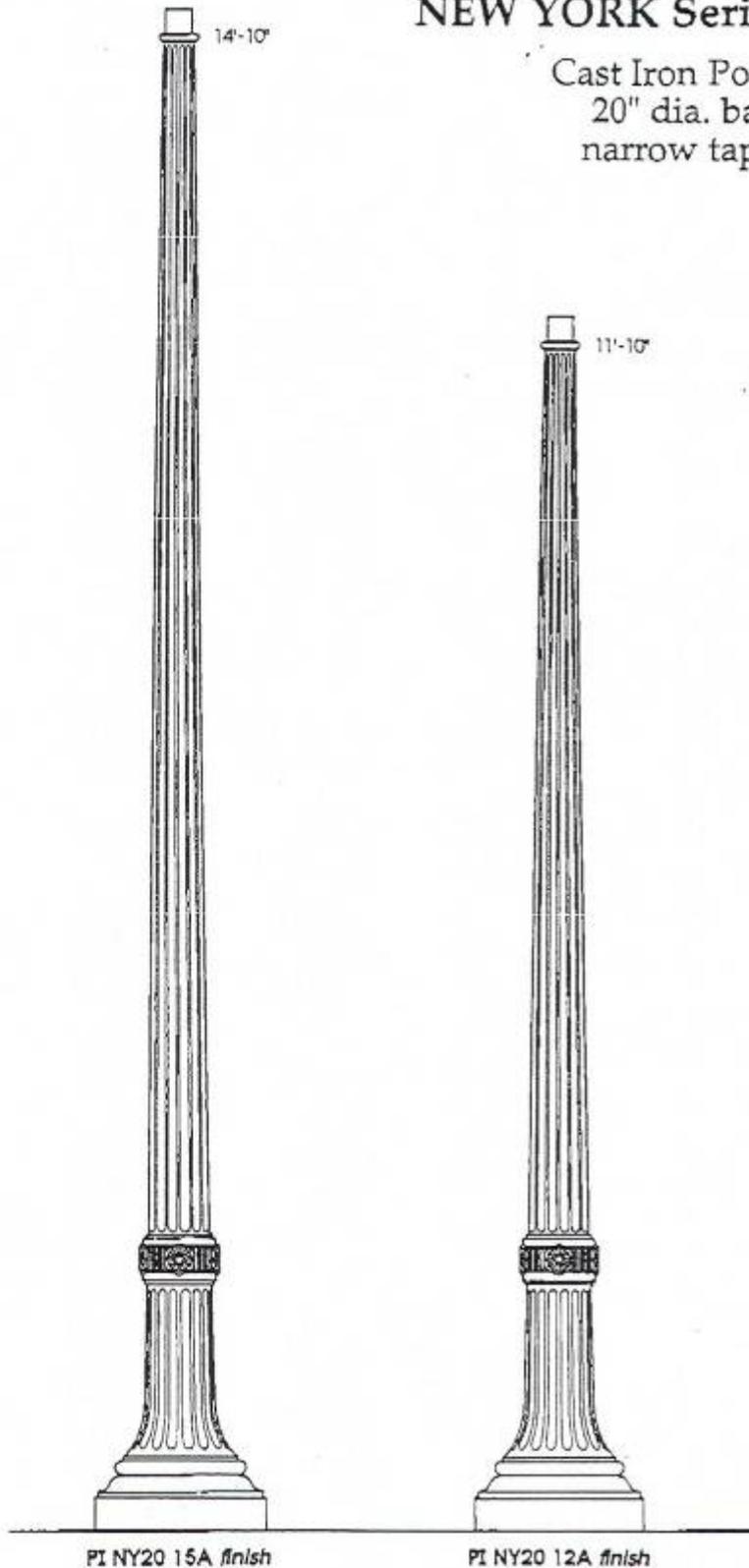


## ANTIQUE Street Lamps

2011-B W. Rundberg Ln. • Austin, TX 78758 • Ph: (512) 977-8444 • Fax: (512) 977-9622

**NEW YORK Series**

Cast Iron Posts  
20" dia. base  
narrow taper

**SPECIFICATIONS****DESCRIPTION**

The lighting post shall be all cast iron construction, gracefully tapered with a deep, 16-flute pattern on the shaft and base. The post shall be Antique Street Lamps' catalog number PI NY20 *XXA finish*.

**MATERIALS**

The post material shall be ASTM A48, Class 30 cast iron, formed true to the pattern with complete detail. All exposed hardware shall be tamper resistant stainless steel. Anchor bolts to be completely hot dip galvanized. Partially galvanized bolts are not acceptable.

**DIMENSIONS**

The post shall be  $\cancel{X}$ '- $\cancel{XX}$ " in height with a 20" diameter base. The post shall taper from 7" diameter at the top of the base to 3.5" diameter at the post top. An Integral 3" O.D. x 3" tenon shall be provided at the top for luminaire mounting. The post top shall include a transitional donut between the fluted shaft and the tenon.

**INSTALLATION**

The post shall be provided with four 3/4" diameter by 24" long, L-type anchor bolts to be installed on a 15" diameter bolt circle. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.

For finish specifications and color options, see "Finish" section in catalog.

## ANTIQUE Street Lamps

2011-B W. Rundberg Ln • Austin, TX 78758  
Ph (512) 977-8444 • Fax (512) 977-9622

# ASC Series Crossarms & Wall Bracket

## SPECIFICATIONS

### CONSTRUCTION

The crossarms and wall brackets shall be one-piece construction. The arms shall be welded to a center spool. For wall brackets, the arm shall be welded to a flat wall plate. All welding shall be per ANSI/AWS D1.2-90. All welders shall be certified per ANSI/AWS D1.2-90 Section 5.

### MATERIALS

The scrolls, finial, center spool, arm spools and center spool tenon shall be heavy-wall, copper free, cast aluminum produced from certified ASTM 356.1 ingot per ASTM B-179-95a or ASTM B26-95. The arm, center luminaire extension piece and wall bracket mounting plate shall be aluminum, ASTM 6061 alloy, heat treated to a T6 temper. All hardware shall be stainless steel. All exterior hardware shall be tamper resistant.

### INSTALLATION

The crossarms shall slip-fit a 3" O.D. x 4" post tap tenon and attach with socket set screws. The center finial shall be removable. The wall bracket shall have four 9/16" dia. holes for mounting to the wall. (Bracket mounting hardware furnished by others.) Both crossarms and wall bracket shall have 3" O.D. tenons for luminaire mounting.

### ORDERING INFORMATION

Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line.

Example: **ASC30/2T ANBK**

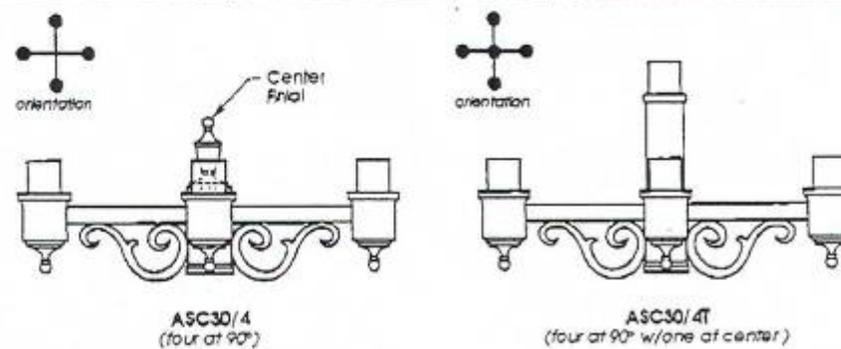
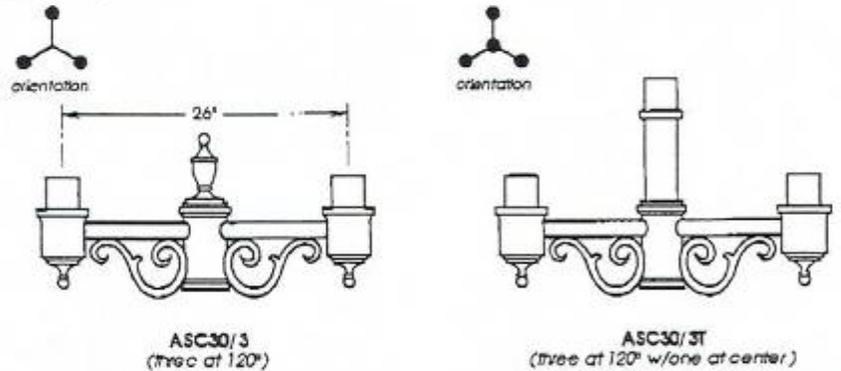
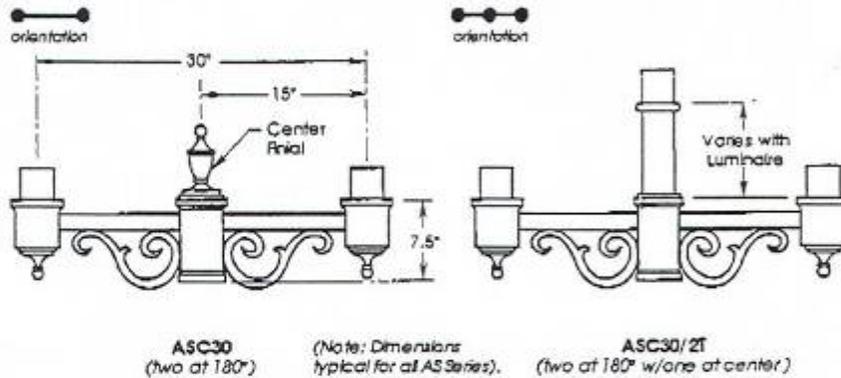
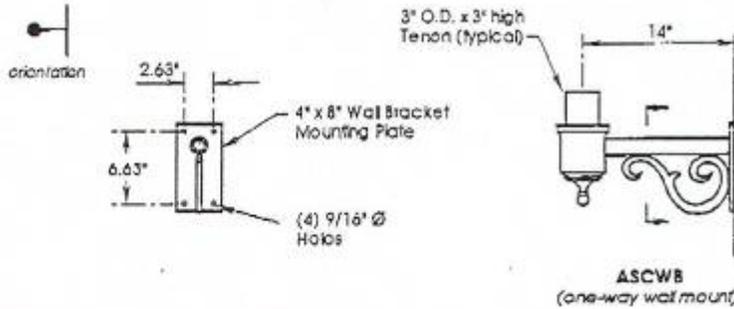
Series	Finish
<b>ASCWB</b>	one <b>ANBK</b> Black
<b>ASC30</b>	two <b>ANDB</b> Dark Bronze
<b>ASC30/2T</b>	three <b>ANDG</b> Dark Green
<b>ASC30/3</b>	three <b>ANVG</b> Verde Green
<b>ASC30/3T</b>	four <b>ANPP</b> Pierre Painted
<b>ASC30/4</b>	four <b>CM</b> Custom Match
<b>ASC30/4T</b>	five <b>CS</b> Custom Select
	<b>RAL</b> colors

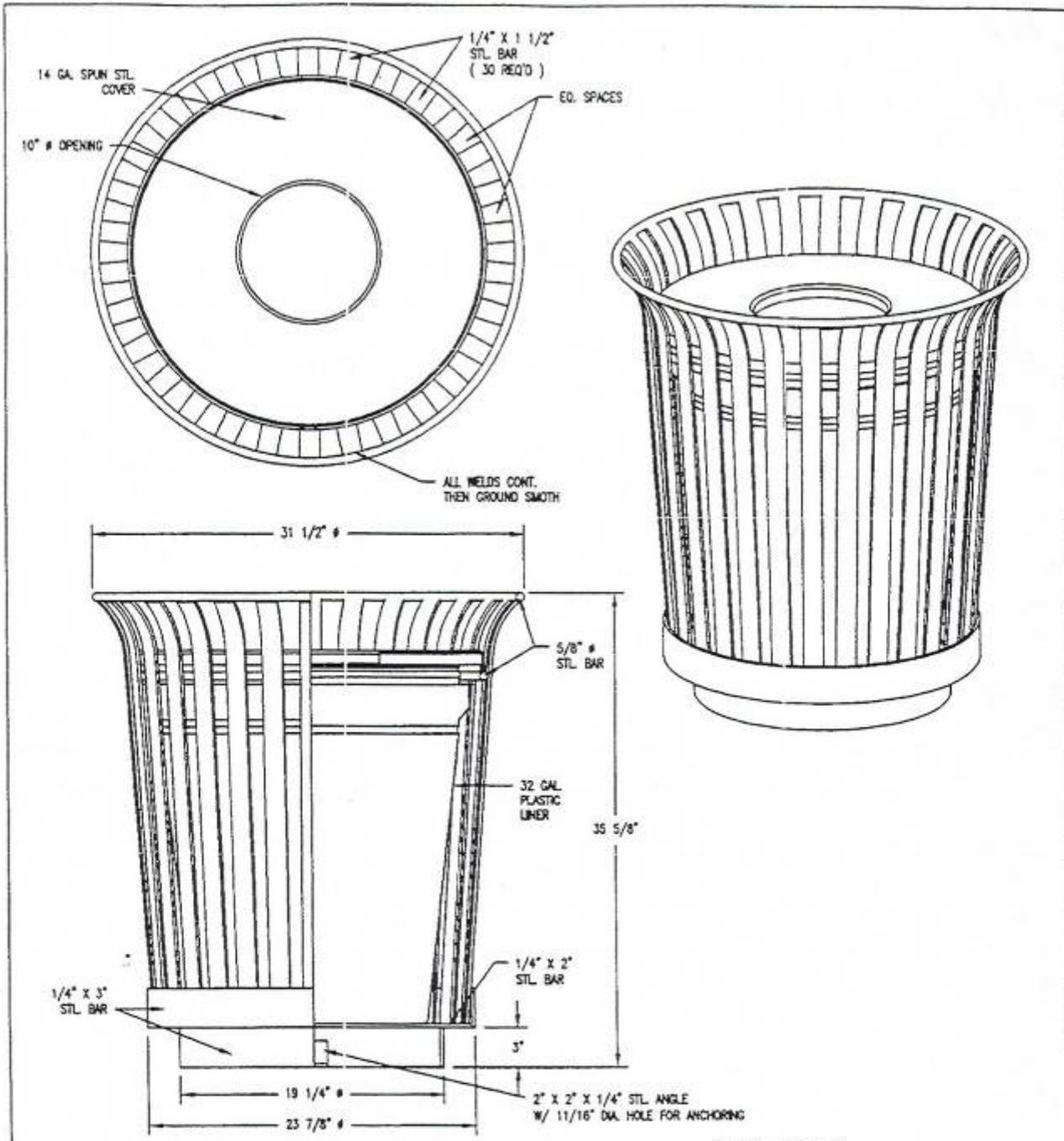
# of luminaires required

NOTES: 1. For finish specifications and color options, see "Finish" section in catalog.

### ANTIQUE Street Lamps

2011-B W. Lundberg Ln. - Austin, TX 78758 - Ph (512) 977-8444





NOTES:

- 1.) ALL STL MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING ( SEE COLOR OPTIONS ).
- 2.) 1/2" x 3 3/4" PLTD. EXPANSION ANCHOR BOLTS PROVIDED.
- 3.) ALL WELDS CONT. THEN GROUND SMOOTH.

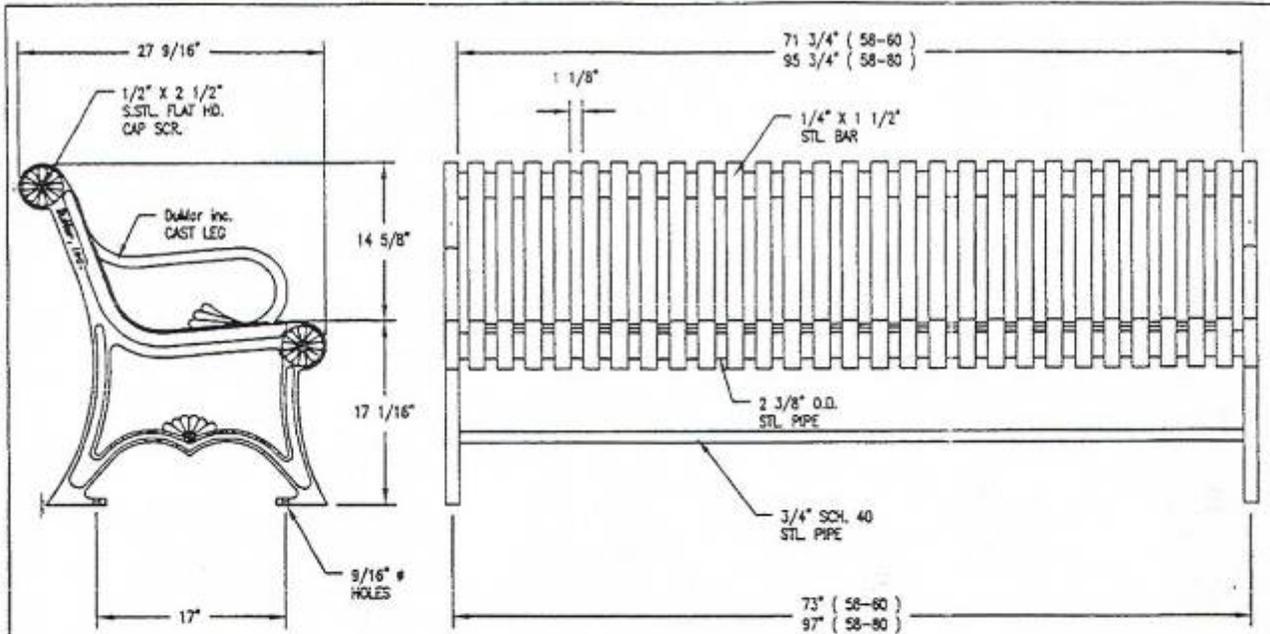
COLOR OPTIONS:

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> BLACK       | <input type="checkbox"/> HUNTER GREEN |
| <input type="checkbox"/> BRONZE      | <input type="checkbox"/> DEEP RED     |
| <input type="checkbox"/> BLUE        | <input type="checkbox"/> GREEN        |
| <input type="checkbox"/> OTHER _____ |                                       |

**DuMor, inc.**  
 P.O. Box 142 Millintown, PA 17059-0142

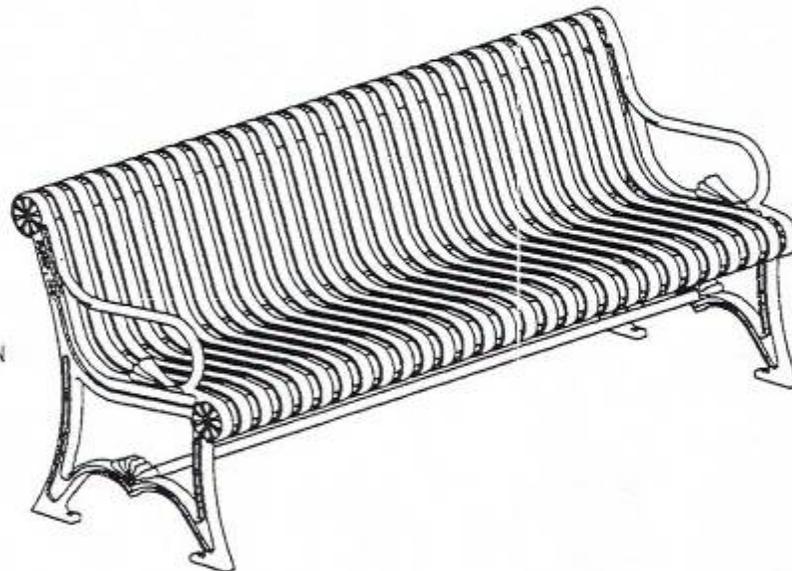
SCALE :	NONE
DATE DRAWN :	12/12/96
DRAWN BY :	AH
DATE REV. :	8/30/99
REV. BY :	JSB

TITLE :	RECEPTACLE		
REV. :	A	DRAWING NUMBER	84-32
			SHEET 1 OF 2



**COLOR OPTIONS**

- BLACK
- BRONZE
- BLUE
- OTHER
- HUNTER GREEN
- DEEP RED
- GREEN



**NOTES**

- 1.) ALL STL MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING ( SEE COLOR OPTIONS ).
- 2.) 1/2" x 3 3/4" PLTD. EXPANSION ANCHOR BOLTS PROVIDED.
- 3.) CUSTOM LETTERING AVAILABLE FOR RECESSED SIDE PANELS ( TOTAL OF 37 SPACES )

CUSTOM LETTERING ( 37 SPACES ) \_\_\_\_\_

**LENGTH OPTIONS**

- 6' BENCH
- 8' BENCH

**DuMor, inc.**  
P.O. Box 142 Mifflintown, PA 17059-0142

SCALE : NONE  
DATE DRAWN : 3/22/94  
DRAWN BY : AH  
DATE REV. : 11/21/99  
REV. BY : JSB

TITLE : BENCH  
REV. D  
DRAWING NUMBER 58 SERIES  
SHEET 1 OF 2